

DATA DISTRIBUTION

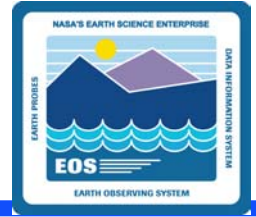
ECS Release 6B Training

Overview of Lesson



- **Introduction**
- **Distribution Concepts**
- **Logging in to ECS Hosts**
- **Launching the Data Distribution Operator and Storage Management Control GUIs**
- **Monitoring/Controlling Distribution Requests**
- **Modifying Preambles**
- **Configuring Storage Management Polling and Deleting Files from Cache**
- **Monitoring Storage Management Server Operations**

Overview of Lesson (Cont.)



- **Launching the Order Manager GUI**
- **Performing Order Manager Operations**
- **Tuning Data Server Subsystem Parameters**
- **Troubleshooting DDIST and Order Manager GUI Problems**
- **PDS Operations**
- **Starting Up PDS**
- **Shutting Down PDS**
- **Monitoring/Controlling Product Processing Using PDS**
- **Monitoring/Controlling Order Processing Using the PDSIS OI**

Overview of Lesson (Cont.)



- **Using the PDS and PDSIS Cleanup Managers**
- **Troubleshooting PDS Problems**
- **Practical Exercise**

Objectives



- **OVERALL:**
 - Develop proficiency in the procedures that apply to data distribution operations
- **SPECIFIC:**
 - Describe the general functions and processes associated with data distribution
 - » In the context of ECS DDIST and PDS operations
 - Perform the steps involved in...
 - » logging in to ECS hosts
 - » launching the Data Distribution Operator and Storage Management Control GUIs
 - » monitoring/controlling data distribution requests
 - » modifying an e-mail preamble
 - » configuring Storage Management polling functions

Objectives (Cont.)



- **SPECIFIC (Cont.):**
 - **Perform the steps involved in...**
 - » deleting files from cache
 - » viewing Storage Management Event Log information
 - » monitoring Storage Management server operations
 - » launching the Order Manager (OM) GUI
 - » responding to an open intervention using the OM GUI
 - » resubmitting a completed distribution request using the OM GUI
 - » viewing a completed intervention using the OM GUI
 - » checking OM queue status using the OM GUI
 - » monitoring Order Manager Server statistics using the OM GUI
 - » viewing the OM GUI log

Objectives (Cont.)



- **SPECIFIC (Cont.):**
 - **Perform the steps involved in...**
 - » **checking OM configuration parameters using the OM GUI**
 - » **modifying system parameters in database tables**
 - » **troubleshooting DDIST problems**
 - » **troubleshooting Order Manager GUI problems**
 - » **starting up PDS**
 - » **shutting down PDS**
 - » **monitoring/controlling product processing using PDS**
 - » **monitoring/controlling order processing using the PDSIS OI**
 - » **troubleshooting PDS problems**

Objectives (Cont.)



- **STANDARDS:**
 - Lesson content (procedures in the lesson)
 - Mission Operation Procedures for the ECS Project (611-CD-610-002)
 - Product Distribution System (PDS) Stand Alone (PDSSA) User's Guide (PDS-114)
 - Product Distribution System (PDS) Input Server (PDSIS) User's Guide (PDS-tbd)

Distribution Concepts



- **ECS Context**

- Data distribution for ECS is accomplished at the Distributed Active Archive Centers (DAACs)
- People involved in data distribution activities are Distribution Technicians
- Order Manager Subsystem (OMS) manages all the orders for data arriving via either the V0 Gateway (GTWAY) or the Spatial Subscription Server (NSBRV)
 - » OMS performs validation of the orders it receives and distributes each validated request to the appropriate ECS order-fulfillment service; i.e., either the Science Data Server (SDSRV) in the Data Server Subsystem (DSS) or the Product Distribution System (PDS)
- Data Server Subsystem (DSS), which manages access to the data archive, is key to data distribution as well as several other functions

Distribution Concepts



- **ECS Context (Cont.)**
 - **Product Distribution System (PDS) supports the distribution of data on the following types of media:**
 - » **8mm tape cartridges**
 - » **Digital Linear Tape (DLT)**
 - » **Compact disk (CD)**
 - » **DVD (formerly “digital video disk” or “digital versatile disk” now referred to as just "DVD")**

Distribution Concepts (Cont.)



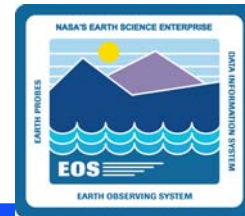
- **ECS Context (Cont.)**
 - **OMS is the subsystem within ECS that validates orders from users and distributes validated requests to the ECS order-fulfillment services**
 - » **Receives orders from the V0 Gateway (GTWAY) or the Spatial Subscription Server (NSBRV)**
 - » **Performs validation of orders and creates “interventions” for invalid orders (puts the orders on hold)**
 - » **Distributes each validated request to the appropriate ECS order-fulfillment service; i.e., PDS or SDSRV**

Distribution Concepts (Cont.)



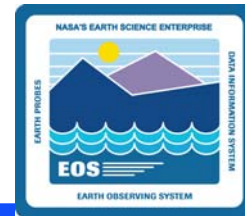
- **ECS Context (Cont.)**
 - **Computer software configuration items (CSCIs) in DSS**
 - » **DDIST**
 - » **STMGT**
 - » **SDSRV**
 - **Computer software elements in PDS**
 - » **Product Distribution System Interface Server (PDSIS)**
 - » **Product Distribution System Stand-Alone (PDSSA)**

Distribution Concepts (Cont.)



- **ECS Context (Cont.)**
 - **DDIST CSCI formats and distributes data to users**
 - » **Accepts requests from the SDSRV CSCI**
 - » **Directs the STMGT CSCI to transfer data**
 - **STMGT CSCI stores, manages, and retrieves data files on behalf of other science data processing components**
 - » **Provides interfaces that allow Data Distribution to obtain access to disk space**
 - » **Maintains a user pull area that supports electronic pull distribution**
 - » **Provides for the copying of files into the archive for permanent storage**

Distribution Concepts (Cont.)



- **ECS Context (Cont.)**
 - **SDSRV CSCI manages and provides user access to collections of non-document Earth Science data**
 - » **Checks/verifies metadata**
 - » **Issues requests to the STMGT and DDIST CSCIs to perform storage and distribution services in support of the processing of service requests, such as insertion of data into the archive or distribution of data products from the archive**

Distribution Concepts (Cont.)



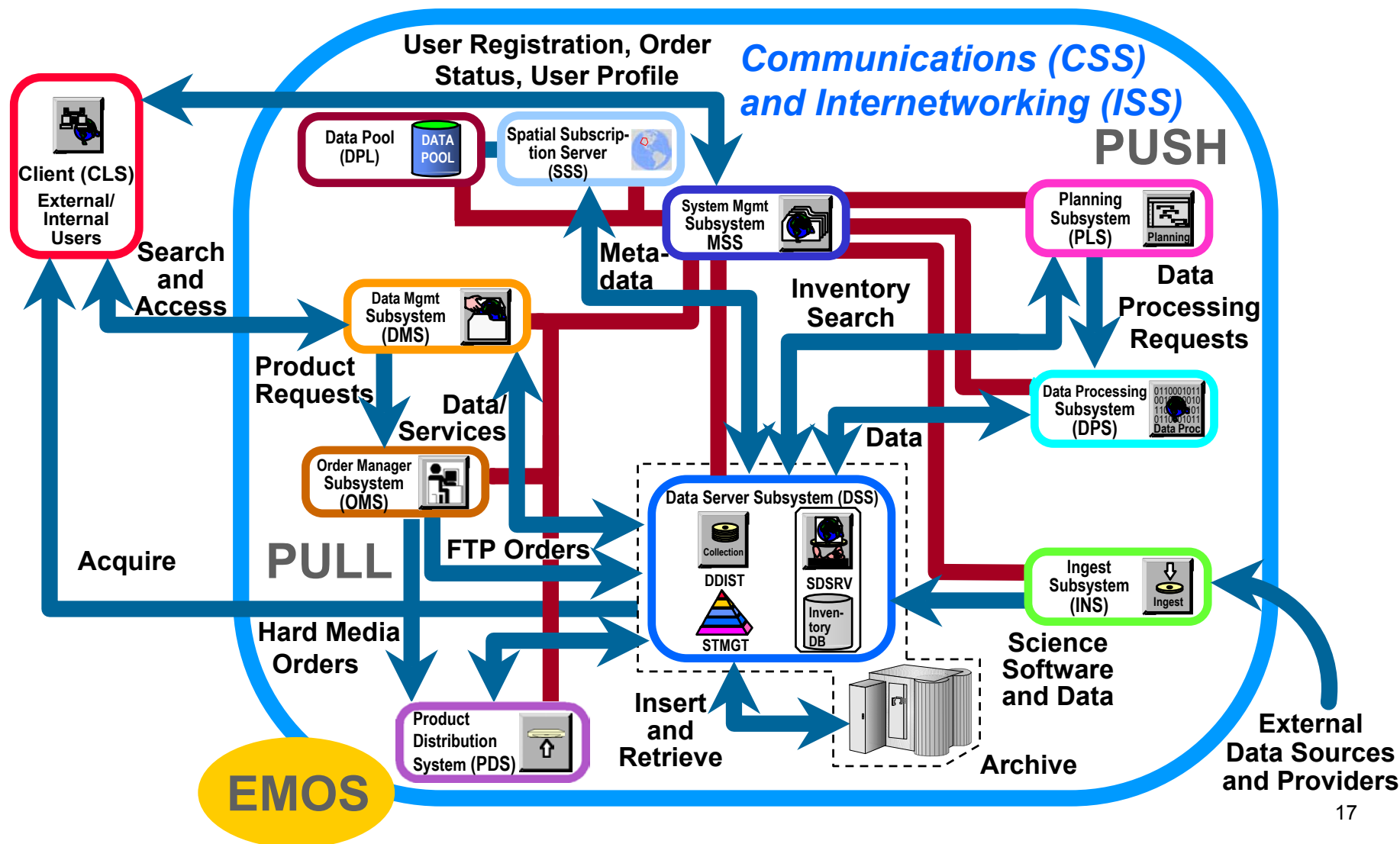
- **ECS Context (Cont.)**
 - **PDSIS (PDS element that provides the interface between ECS and the PDSSA)**
 - » **Accepts multiple digital product requests via Version 0 Gateway (V0GW) Object Description Language (ODL) files that are forwarded to PDSIS by the Order Manager Server**
 - » **Requests digital product data from ECS in product request parameter files that are sent via the Science Data Server (SDSRV) Command Line Interface (SCLI)**
 - » **Receives digital product data from ECS via ftp push**
 - » **Coordinates PDSSA processing to include detection and resolution of data transfer problems, data flow control, and order recovery**
 - » **Generates packaging and shipping artifacts (packing lists, shipping labels, e-mail distribution notices)**

Distribution Concepts (Cont.)



- **ECS Context (Cont.)**
 - **PDSSA (PDS element that transfers digital products to physical media)**
 - » **Acquires digital products from disk, resolves and detects transfer problems, and re-pulls data**
 - » **Transfers digital products to physical media (e.g., CD-ROM, DVD-ROM, High-density 8mm tape, DLT 7000c)**
 - » **Prints labels and inserts (e.g., tape labels, CD-ROM and DVD-ROM labels (printed on the disks), jewel-case inserts)**
 - » **Removes digital source files upon completion of a media product**
 - » **Supports management of PDSSA data, job status, and reports**
 - » **Supports management of PDSSA operations through operator interfaces**

ECS Context Diagram



Launching the Order Manager GUI



- **Order Manager Subsystem (OMS)**
 - **Performs the following functions:**
 - » **Manages all the orders arriving via either the V0 Gateway (GTWAY) or the Spatial Subscription Server (NSBRV)**
 - » **Performs validation of the orders it receives before submitting the applicable requests to the order-fulfilling services**
 - » **Distributes each validated request to the appropriate ECS order-fulfillment service; i.e., PDS or SDSRV, depending on whether the request is for physical media or electronic distribution**

Launching the Order Manager GUI



- **Order Manager Subsystem (OMS) (Cont.)**
 - Orders that arrive via the V0 Gateway are those that have been submitted by EDG, EOSDIS ClearingHUse (ECHO), or ASTER Ground Data System (GDS) users
 - OMS has no involvement with other types of orders that do not come from either the V0 Gateway or the Spatial Subscription Server
 - » e.g., input data for Data Processing or Machine-to-Machine Gateway orders

Launching the Order Manager GUI



- **Order Manager Subsystem (OMS) (Cont.)**
 - **Order Manager performs validation of the orders it receives before submitting the applicable requests to the order-fulfilling services**
 - **If a request does not pass validation, an “intervention” is created and the request is held until it has been reviewed by a DAAC technician**
 - » **The intent is to catch many of the kinds of exceptions or errors that have caused requests to fail or be suspended during downstream request processing**
 - » **Problems include very large orders and inappropriate media selections (given the size of the order)**
 - **A DAAC technician reviews each intervention and either modifies the request (if possible) or terminates the request (if necessary)**
 - » **In either case negative effects on downstream processing are less likely to occur**

Launching the Order Manager GUI



- **Order Manager Subsystem (OMS) (Cont.)**
 - Order Manager distributes each validated request to the appropriate ECS order fulfillment service (i.e., PDS or SDSRV) depending on whether the request is for physical media or electronic distribution
 - If errors are encountered during processing or shipping, the DAAC technician can resubmit the affected request using the Order Manager GUI

Launching the Order Manager GUI (Cont.)



- **OMS major components:**
 - **Order Manager Server**
 - » **Server that processes data requests from ordering services; e.g., the V0 Gateway or the NSBRV**
 - » **Dispatches the requests to order fulfillment services; e.g., SDSRV or PDS**
 - **Sybase ASE Server**
 - » **COTS software application that handles order management-related interactions (including insertion and retrieval of data) with the Order Management database**
 - **Order Manager (OM) GUI**
 - » **GUI that allows operators to view and modify requests that the Order Manager Server has placed on hold because they require operator intervention**
 - » **In addition, the GUI allows operators to resubmit requests or portions of a request that failed**

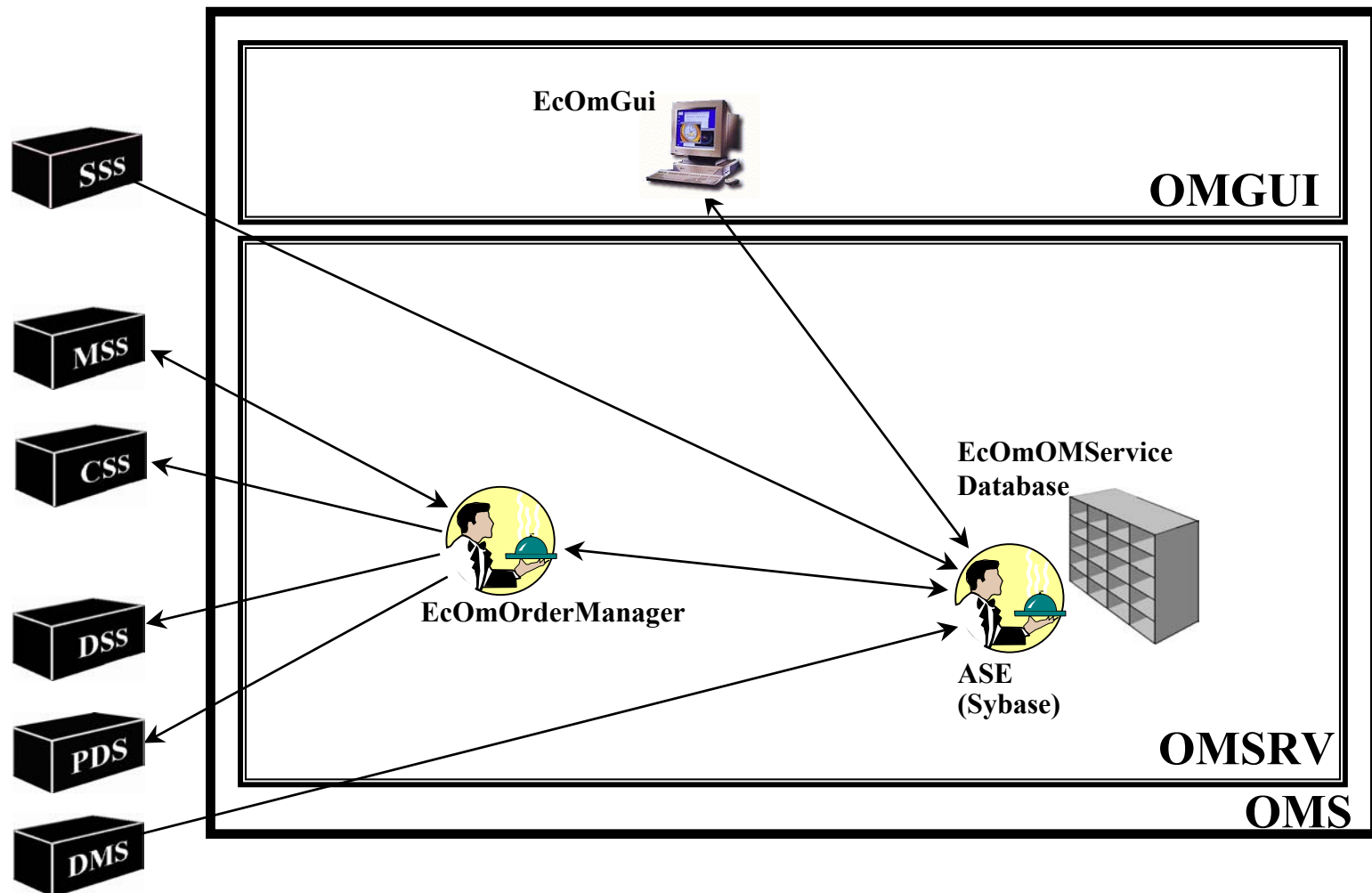
Launching the Order Manager GUI (Cont.)



- **OM GUI Scripts**

- In `/usr/ecs/MODE/CUSTOM/WWW/OMS/cgi-bin` directory on the Data Pool Server host (not invoked directly by Distribution personnel)
- **Examples:**
 - » `EcOmGuiCloseConfirmation.pl`
 - » `EcOmGuiCompletedInterv.pl`
 - » `EcOmGuiCompletedIntervDetail.pl`
 - » `EcOmGuiDBConfig.pl`
 - » `EcOmGuiDistributionRequestDetail.pl`
 - » `EcOmGuiDistributionRequests.pl`
 - » `EcOmGuiEcsOrder.pl`
 - » `EcOmGuiEnvPerl`
 - » `EcOmGuiError.pl`
 - » `EcOmGuiHomePage.pl`

Order Manager Subsystem: Architecture and Interfaces

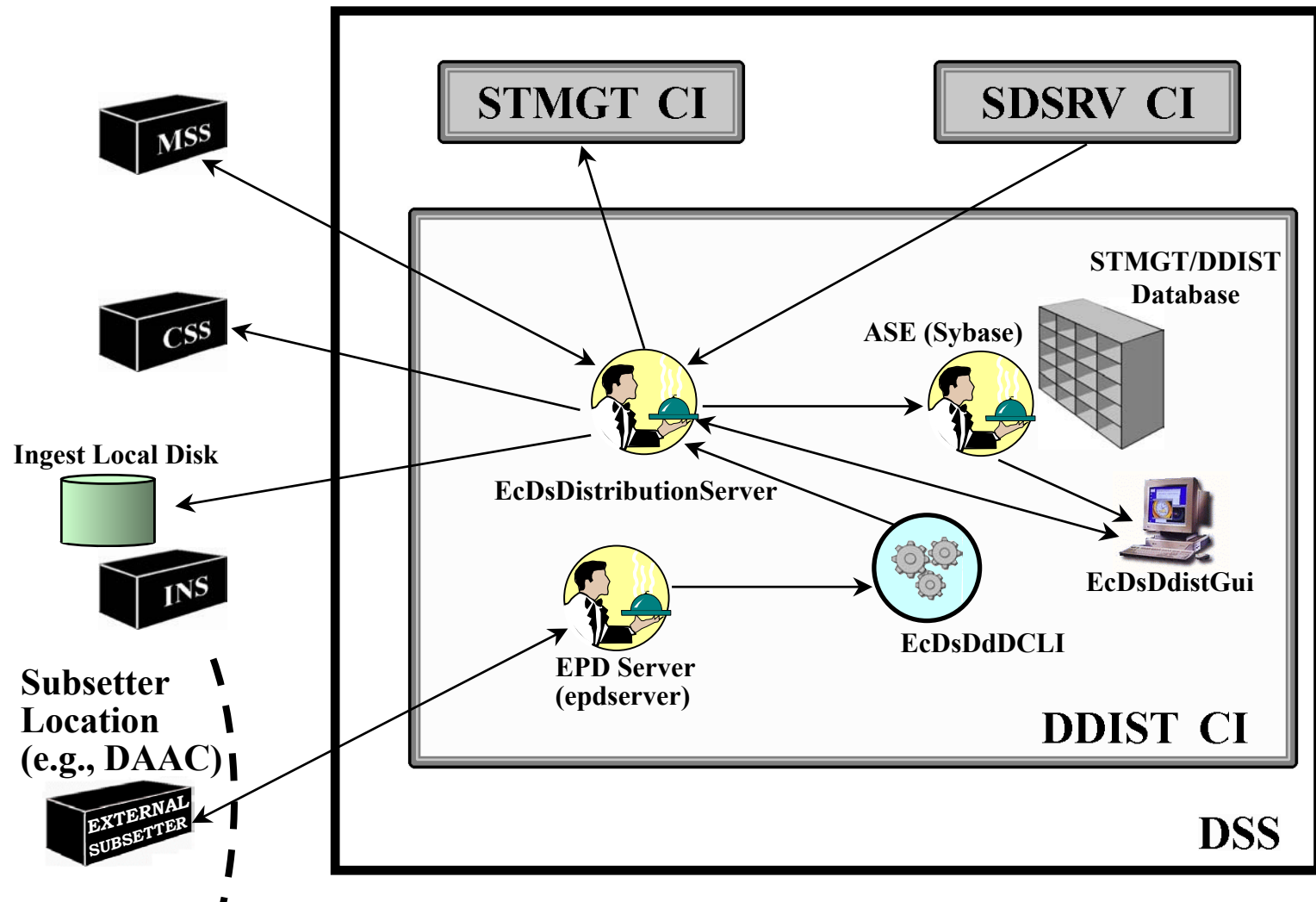


Distribution Concepts (Cont.)



- **DDIST**
 - **Data Distribution Operator GUI (EcDsDdistGui)**
 - **Distribution Server (EcDsDistributionServer)**
 - **Sybase Adaptive Server Enterprise (ASE) Server**
 - **External Product Dispatcher (EPD)**
 - **DDIST Command Line Interface (DCLI)**

Data Server Subsystem: DDIST Architecture and Interfaces



Distribution Concepts (Cont.)



- **DDIST (Cont.)**
 - **Start-up script used by Distribution Technicians (/usr/ecs/MODE/CUSTOM/utilities directory on the Operations Workstation)**
 - » **EcDsDdistGuiStart**
 - **Start-up scripts called by other applications (not normally invoked directly by Distribution Technicians)**
 - » **EcDsDataDistributionAppStart**
 - » **EcDsDdStart**
 - » **EcDsDistributionServerStart**
 - **Other scripts**
 - » **DsDdSendMailPl.pl**
 - » **EcDsDdPTEdit.pl [obsolete]**

Distribution Concepts (Cont.)



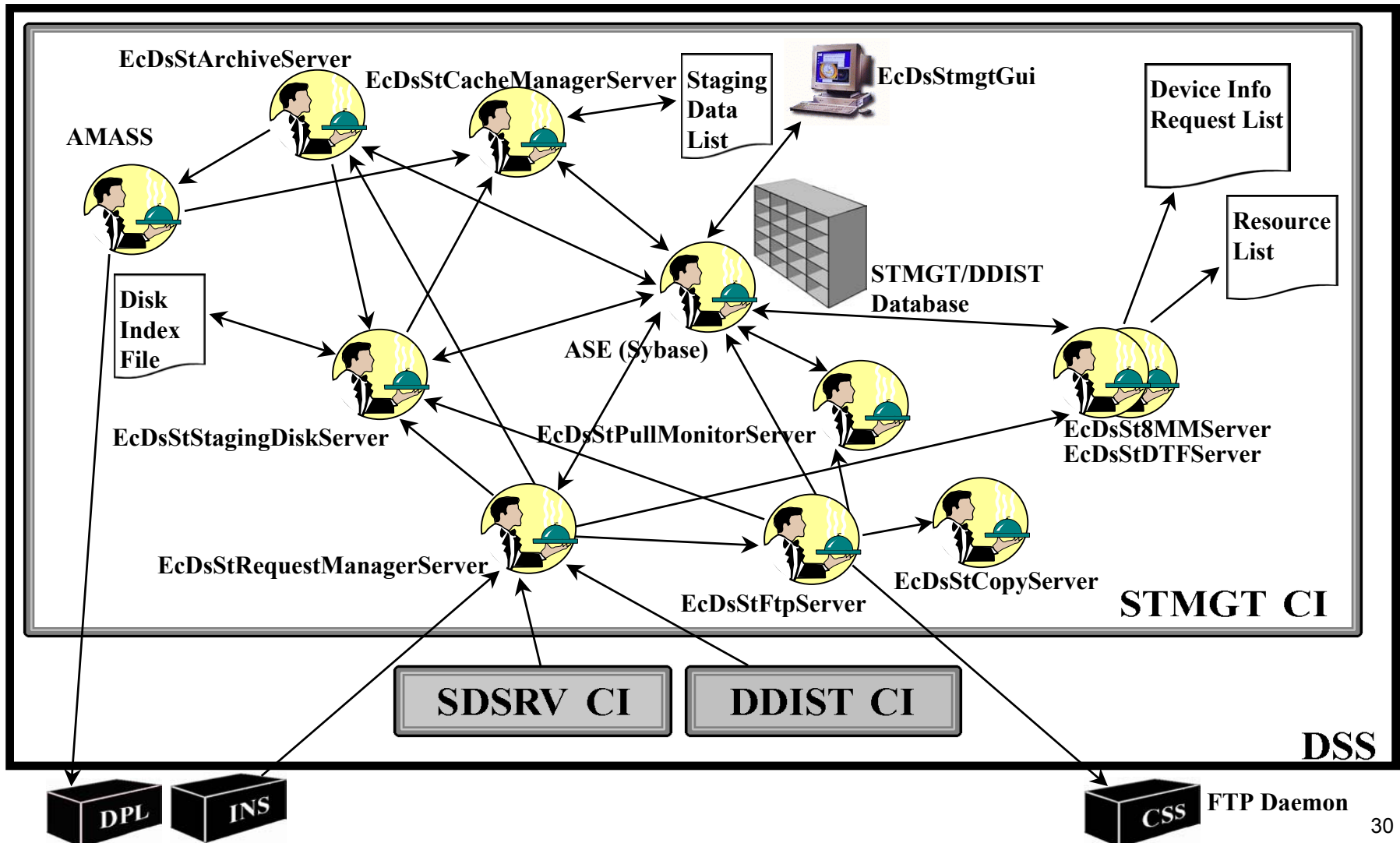
- **STMGT**
 - **Archive Server (EcDsStArchiveServer)**
 - **Staging Servers**
 - » **Cache Manager Server (EcDsStCacheManagerServer)**
 - » **Pull Monitor (EcDsStPullMonitorServer) [symbolic link to the Cache Manager Server]**
 - » **Staging Disk Server (EcDsStStagingDiskServer)**
 - **Resource Managers**
 - » **8mm Server (EcDsSt8MMServer)**
 - » **DTF-2 Server (EcDsStDTFServer)**
 - » **FTP Server (EcDsStFtpServer)**
 - » **Copy Server (EcDsStCopyServer)**
 - **Storage Management Request Manager (EcDsStRequestManagerServer)**
 - **Storage Management Control GUI (EcDsStmgtGui)**

Distribution Concepts (Cont.)



- **STMGT (Cont.)**
 - Sybase ASE Server
 - Archival Management and Storage System (AMASS)

Data Server Subsystem: STMGT Architecture and Interfaces

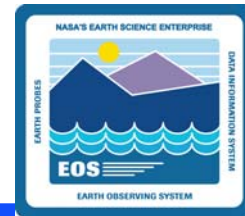


Distribution Concepts (Cont.)



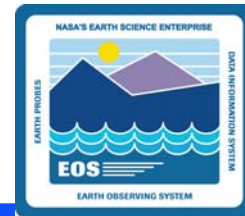
- **STMGT (Cont.)**
 - **Start-up script used by Distribution Technicians (/usr/ecs/*MODE*/CUSTOM/utilities directory on the Operations Workstation)**
 - » **EcDsStmgtGuiStart**

Distribution Concepts (Cont.)



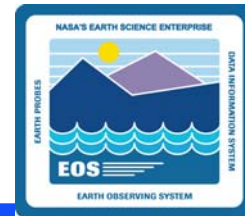
- **STMGT (Cont.)**
 - **Start-up scripts called by other applications (not normally invoked directly by Distribution personnel)**
 - » **EcDsStFtpServerStart**
 - » **EcDsStStagingDiskServerStart**
 - » **EcDsStStart**
 - » **EcDsStStorageMgmtAppStart**
 - » **EcEcsAppStart**
 - » **EcDsStArchiveServerStart**
 - » **EcDsStCacheManagerServerStart**
 - » **EcDsStRequestManagerServerStart**
 - » **EcDsSt8MMServerStart**
 - » **EcDsStDLTServerStart**
 - » **EcDsStCDROMServerStart**

Distribution Concepts (Cont.)



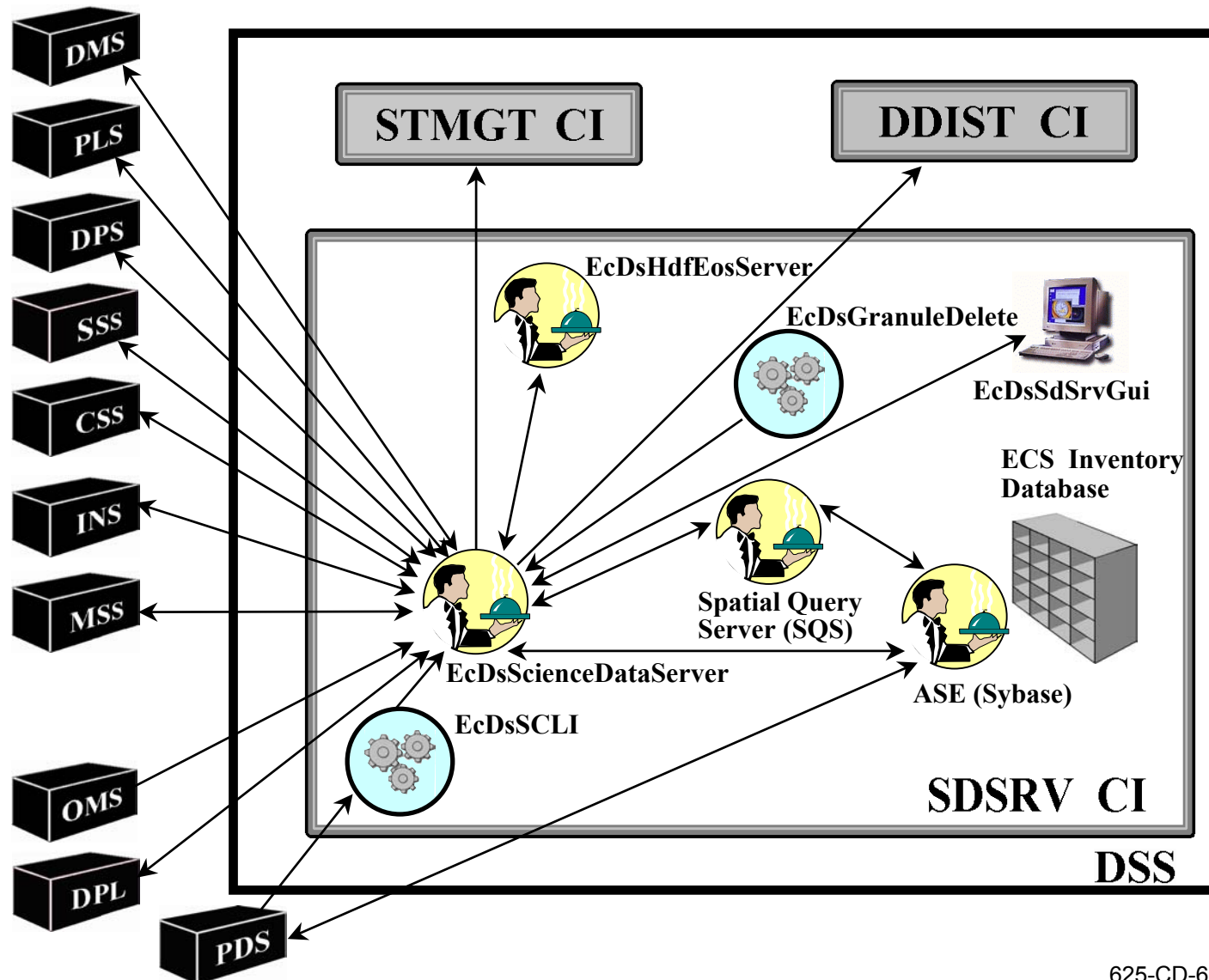
- **STMGT (Cont.)**
 - **Other scripts**
 - » **EcDsCheckArchive**
 - » **EcDsStConfigVolGrps**
 - » **EcDsStDbBuild**
 - » **EcDsStDbDrop**
 - » **EcDsStDbDump**
 - » **EcDsStDbDumpTrans**
 - » **EcDsStDbLoad**
 - » **EcDsStDbLoadTrans**
 - » **EcDsStDbPatch**
 - » **EcDsStFilesPerTapeUtility**
 - » **EcDsStVolGrpCreateMain.pl**

Distribution Concepts (Cont.)



- **SDSRV**
 - **Science Data Server (EcDsScienceDataServer)**
 - **Hierarchical Data Format (HDF) EOS Server (EcDsHdfEosServer)**
 - **Granule Deletion Administration Tool (EcDsGranuleDelete)**
 - **Science Data Server GUI (EcDsSdSrvGui)**
 - **Science Data Server (SDSRV) Command Line Interface (SCLI) (EcDsSCLI)**
 - **Autometric Spatial Query Server (SQS)**
 - **Sybase ASE Server**

Data Server Subsystem: SDSRV Architecture and Interfaces

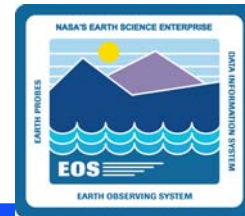


Distribution Concepts (Cont.)



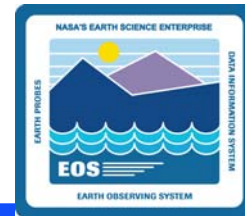
- **SDSRV (Cont.)**
 - **Start-up script (/usr/ecs/*MODE*/CUSTOM/utilities directory on the Operations Workstation)**
 - » **EcDsSdSrvGuiStart**

Distribution Concepts (Cont.)



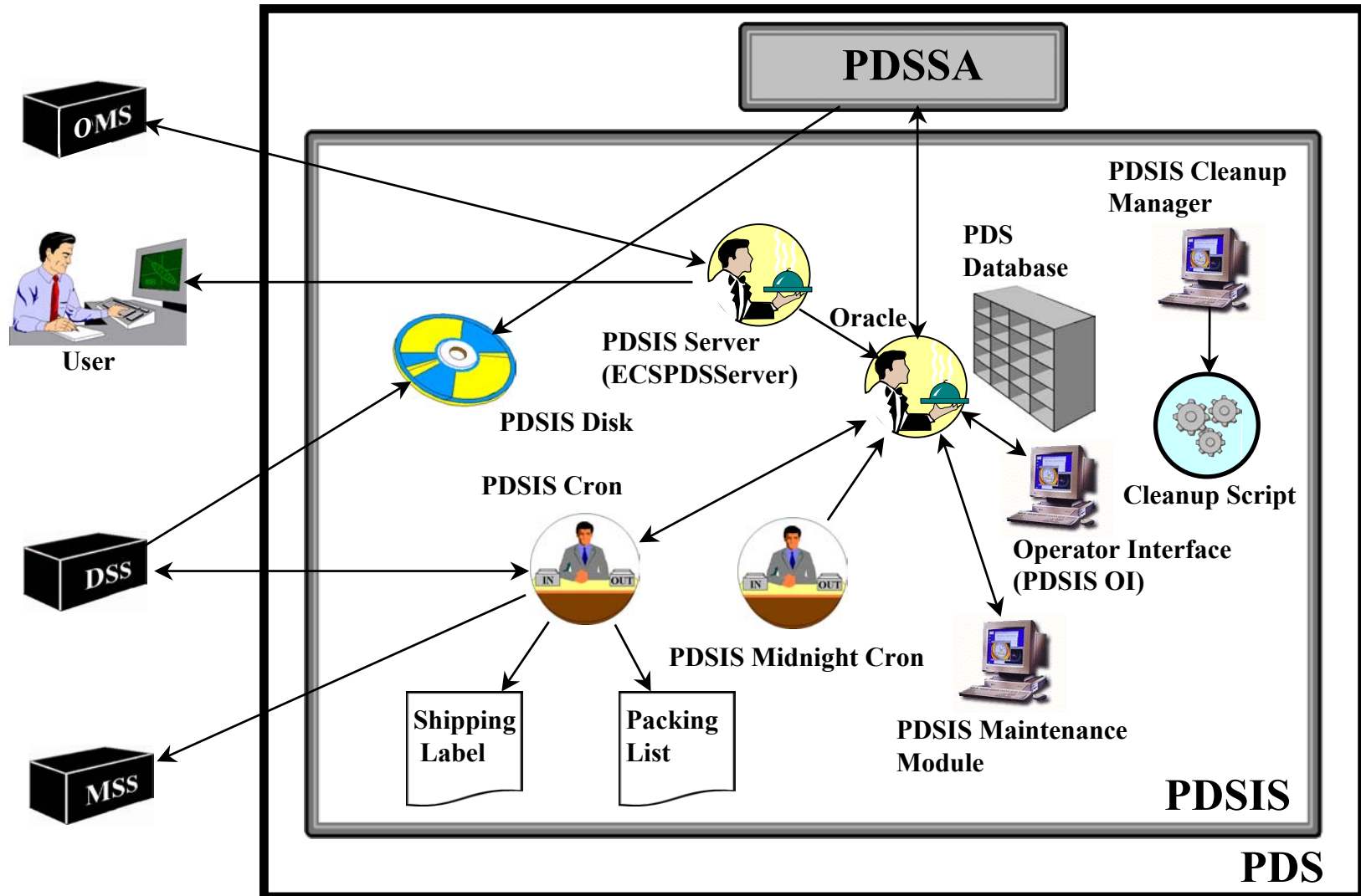
- **SDSRV (Cont.)**
 - **Other scripts**
 - » **EcTsDsClientDriverStart**
 - » **EcDsSrConvertEvt**
 - » **EcDsSrDbBuild**
 - » **EcDsSrDbDrop**
 - » **EcDsSrDbDump**
 - » **EcDsSrDbLoad**
 - » **EcDsSrDbMigrate**
 - » **EcDsSrDbPatch**
 - » **EcDsSrDbValids**

Distribution Concepts (Cont.)



- **PDSIS**
 - **PDSIS Operator Interface (PDSIS OI)**
 - **PDSIS Maintenance Module**
 - **PDSIS Server (ECSPDSServer)**
 - **PDSIS Cron**
 - **PDSIS Midnight Cron**
 - **PDSIS Cleanup Manager**
 - **Cleanup Script**
 - **Oracle Database Server**

Product Distribution System: PDSIS Architecture and Interfaces



Distribution Concepts (Cont.)



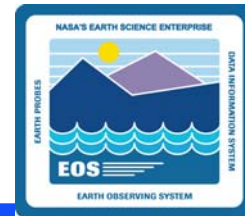
- **PDSIS (Cont.)**
 - **Aliases available when logging in to the PDS Server host using either a PDS user ID (e.g., pds, pds_st, or pds_it) or a PDSIS user ID (e.g., pdsis, pdsis_ts1, or pdsis_ts2):**
 - » **pdsisoi**
 - » **pdsismaint**
 - **Aliases may vary somewhat depending on the site set-up**

Distribution Concepts (Cont.)



- **PDSIS (Cont.)**
 - **Alternatively, the following start-up scripts are available in the “run” subdirectory of the PDS root directory (i.e., /usr/local/pds/run, /usr/local/pds_st/run, or /usr/local/pds_it/run depending on whether OPS-, TS1-, or TS2-mode processing is being accomplished) on the PDS Server host:**
 - » **pdsisoi_mode.sh, (e.g., pdsisoi.sh, pdsisoi_st.sh, or pdsisoi_it.sh, depending on whether OPS-, TS1-, or TS2-mode processing is being accomplished)**
 - » **pdsismaint_mode.sh (e.g., pdsismaint.sh, pdsismaint_st.sh, or pdsismaint_it.sh, depending on whether OPS-, TS1-, or TS2-mode processing is being accomplished)**
 - **Script names may vary somewhat depending on the site set-up**

Distribution Concepts (Cont.)



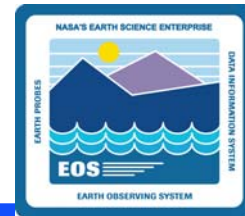
- **PDSIS (Cont.)**
 - Scripts available in the
`/usr/local/pdsis_mode/utilities` directory (i.e.,
`/usr/local/pdsis/utilities`,
`/usr/local/pdsis_ts1/utilities`, or
`/usr/local/pdsis_ts2/utilities`) on the PDS Server
host:
 - » **EcPdPDSISServerStart**
 - » **EcPdIsPdsisCleanup**
 - » **EcPdPDSISResetOrder**

Distribution Concepts (Cont.)



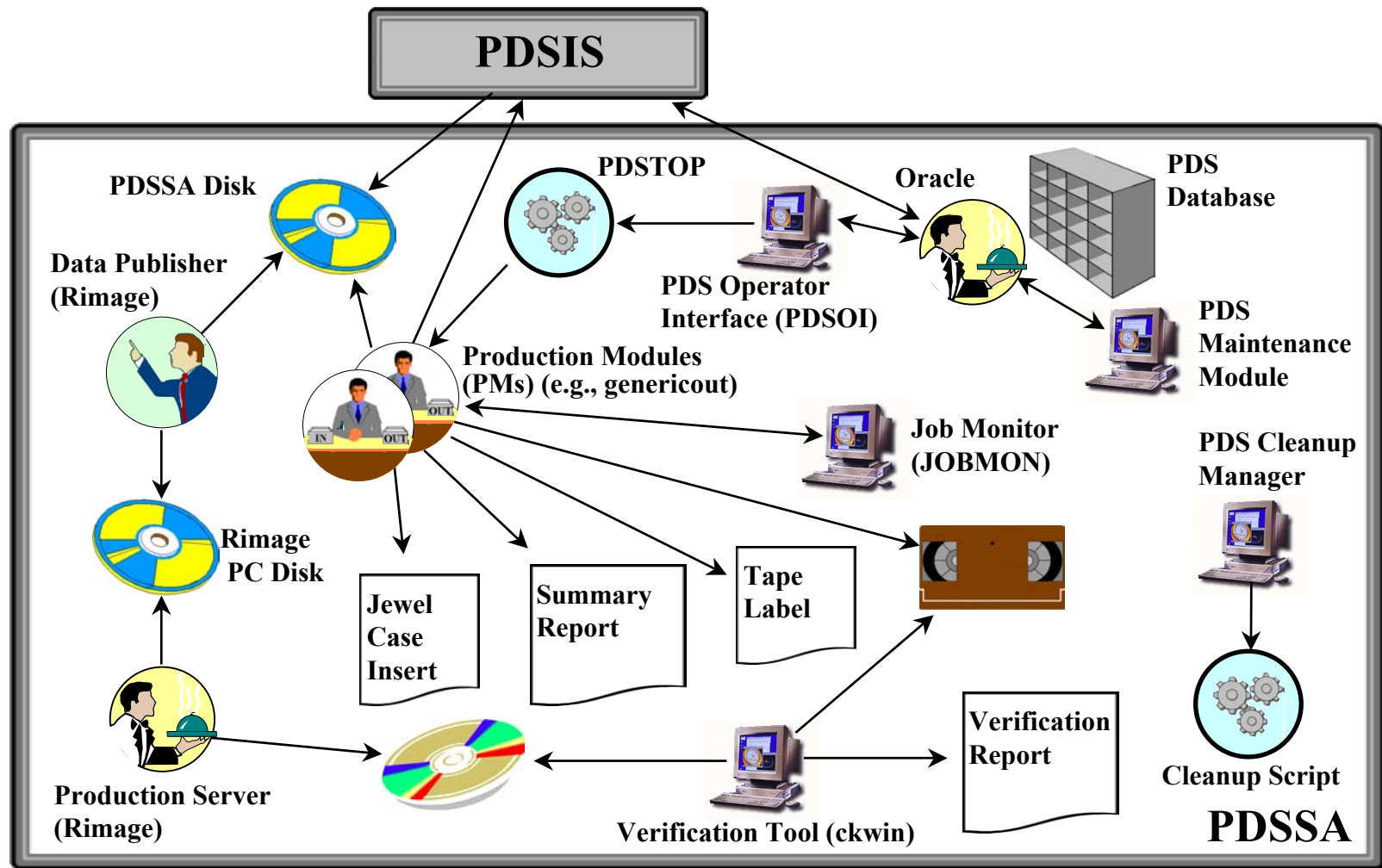
- **PDSIS (Cont.)**
 - **Start-up scripts available (but not normally invoked directly by distribution personnel) in the /usr/local/pdsis_mode/utilities directory (i.e., /usr/local/pdsis/utilities, /usr/local/pdsis_ts1/utilities, or /usr/local/pdsis_ts2/utilities) on the PDS Server host [typically called by other applications (especially cron)]:**
 - » **EcPdPDSISCronStart**
 - » **EcPdPDSISMidnightCronStart**
 - » **EcPdlsPdsisActivator**
 - » **EcPdlsStartActivateCron**

Distribution Concepts (Cont.)



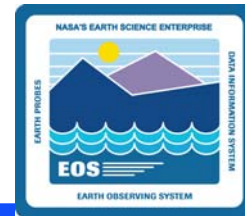
- **PDSSA**
 - **PDS Operator Interface (PDSOI)**
 - **PDS Job Monitor (JOBMON)**
 - **PDS Verification Tool (ckwin)**
 - **PDS Maintenance Module**
 - **PDSTOP (pdstop2.pl)**
 - **Production Modules (e.g., genericout, genericout2)**
 - **Rimage Data Publisher**
 - **Rimage Production Server**
 - **PDS Cleanup Manager**
 - **Cleanup Script**
 - **Oracle Database Server**

Product Distribution System: PDSSA Architecture and Interfaces



PDS

Distribution Concepts (Cont.)



- **PDSSA (Cont.)**

- **Aliases available when logging in to the PDS Server host as a PDS user (i.e., pds, pds_st, or pds_it):**
 - » **pdsoi**
 - » **pdsmaint**
 - » **jobmon**
 - » **ckwin**
- **Aliases may vary somewhat depending on the site set-up**

Distribution Concepts (Cont.)



- **PDSSA (Cont.)**
 - **Alternatively, the following start-up scripts are available in the “run” subdirectory of the PDS root directory (i.e., /usr/local/pds/run, /usr/local/pds_st/run, or /usr/local/pds_it/run) on the PDS Server host:**
 - » **pdsoi_mode.sh, (e.g., pdsoi.sh, pdsoi_st.sh, or pdsoi_it.sh, depending on whether OPS-, TS1-, or TS2-mode processing is being accomplished)**
 - » **pdsmaint_mode.sh (e.g., pdsmaint.sh, pdsmaint_st.sh, or pdsmaint_it.sh)**
 - » **jobmonitor**
 - » **pdscleanup**
 - **Script names may vary somewhat depending on the site set-up**

Distribution Concepts (Cont.)



- **PDSSA (Cont.)**
 - **Start-up script available in the “jobmon” subdirectory of the PDS root directory (i.e., /usr/local/pds/jobmon, /usr/local/pds_st/jobmon, or /usr/local/pds_it/jobmon) on the PDS Server host:**
 - » **jobmonitor**
 - **Start-up script available in the run/verify subdirectory of the PDS root directory (i.e., /usr/local/pds/run/verify, /usr/local/pds_st/run/verify, or /usr/local/pds_it/run/verify) on the PDS Server host:**
 - » **ckwin**
 - **Script names may vary somewhat depending on the site set-up**

Distribution Concepts (Cont.)



- **PDSSA (Cont.)**

- Other applications in the “run” subdirectory of the PDS root directory (i.e., /usr/local/pds/run, /usr/local/pds_st/run, or /usr/local/pds_it/run) on the PDS Server host (not normally invoked directly by Distribution personnel)

- » genericout
 - » genericout2
 - » l0out
 - » mkisofs
 - » pdstop2.pl
 - » xgettape_notae
 - » Scripts and production modules (e.g., demout, drgout, l1out, nlapsout) that are used in non-ECS implementations of PDS

Distribution Concepts (Cont.)



- **Data Distribution is a process of retrieving archived data and providing the data to requesters in response to the orders they submit**
 - external requesters
 - internal processes
- **Data retrieved from the archives can be distributed to requesters using either of the following three general methods:**
 - Electronic pull
 - Electronic push
 - Hard (physical) media distribution on disks or tape cartridges [distributed through the Product Distribution System (PDS)]

Distribution Concepts (Cont.)



- **Method of data distribution is dictated by the nature of the data distribution request**
 - Requester specifies the distribution method when ordering or subscribing to the data

Distribution Concepts (Cont.)



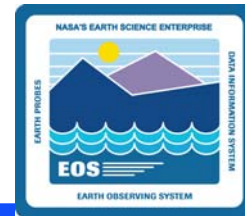
- **Electronic Pull:**
 - Requester searches for a specific data product
 - Requester submits an order for a “pull” of the data using file transfer protocol (ftp)
 - STMGT retrieves the specified data from the archive and places it on the pull disk
 - DDIST builds an e-mail notification that the requester’s order has been filled
 - Message is sent via e-mail to the requester’s e-mail address, which is determined from the User Profile
 - Requester pulls (transfers) the data from the Data Server pull disk to the requester’s own system
 - Data are deleted from the pull disk in accordance with DAAC policy

Distribution Concepts (Cont.)



- **Electronic Push:**
 - Requester searches for a specific data product
 - Requester submits an order for ftp “push” of the data
 - Data are retrieved from the archive, placed on the Data Server staging disk and pushed (transferred) to the requester's system
 - DDIST builds an e-mail notification that the requester's order has been filled
 - Message is sent via e-mail to the requester's e-mail address, which is determined from the User Profile
 - Data are deleted from the staging disk in accordance with DAAC policy

Distribution Concepts (Cont.)



- **Physical Media Distribution:**
 - Requester searches for a specific data product
 - Requester submits an order for shipment of data on a physical medium
 - If an order to be delivered on a physical medium is for a product other than a Landsat-7 product, the Order Manager Server forwards the order to the Product Distribution System (PDS)
 - For Landsat-7 products, the V0 Gateway first forwards the order to be delivered on a physical medium to the Distributed Ordering, Research, Reporting and Accounting Network (DORRAN) at the Earth Resources Observation Systems (EROS) Data Center (EDC); then when the gateway receives a validated Product Request from DORRAN, sends the Landsat-7 order to the Order Manager Server, which forwards the order to PDS

Distribution Concepts (Cont.)



- **Physical Media Distribution (Cont.):**
 - For each order it receives from the Order Manager Server, the PDS orders the requested data from the ECS using the Science Data Server (SDSRV) Command Line Interface (SCLI)
 - » The PDS may break up large orders into smaller sets and may elect to order granules for a request individually
 - ECS delivers the data to the PDS using its standard ftp push data distribution capability
 - The PDS transfers the data to the specified physical medium
 - The PDS e-mails a data distribution notice (order shipment notification) to the user and (for Landsat-7 orders) to DORRAN
 - The PDS updates the ECS order tracking database to completed status

PDS (PDSIS) Order Management



- **PDS Order Break-Down vs. ECS Order Break-Down**
 - Disparities in the way the various elements are managed
 - Differences in the terminology that refers to the different elements
 - » ECS “orders” are composed of “requests” and requests consist of granules
 - » In PDS (i.e., PDSIS) each ECS “request” is converted to an “order” composed of “units” and a unit consists of one granule

PDS (PDSIS) Order Management



- **PDS Order Break-Down vs. ECS Order Break-Down (Cont.)**
 - ECS requests are grouped by media type
 - » If there is a problem with a request in an ECS order, it causes a problem with the entire order
 - In PDS if there is a problem with some of the units in an order, it is possible to ship a partial order (i.e., the customer receives the units that can be completed)
 - » Additional units in the order may be completed at a later time

ECS to PDS Order Breakdown Structure



PDSIS Control

ECS Order

Request_ID_1 =>

Granule_1

Granule_2

Granule_3

Granule_4

Granule_5

Granule_6

Granule_7

Granule_n

...

Request_ID_2 =>

Granule_10

Granule_11

Granule_12

Granule_13

PDSSA Control

PDS Order#_1

Unit_1

Unit_2

Unit_3

Unit_4

Unit_5

Unit_6

Unit_7

Unit_n

...

PDS Order#_2

Unit_1

Unit_2

Unit_3

Unit_4



Media 1-n



Packing List



Distribution Notice (e-mail)



Packing Slip

PDS (PDSIS) Order Management (Cont.)



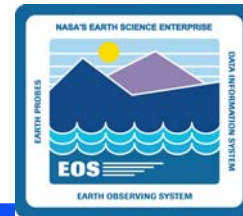
- **“Grouping” Methodology**
 - Large orders (e.g., greater than 300GB) are managed by PDSIS via a “grouping” methodology
 - » Grouping affects both media creation and working space cleanup and release
 - There are two grouping factors, only one of which (as specified in one of the PDSIS database tables) is in effect at a time
 - » Granule size
 - » Group limits
 - The grouping factor is relevant only for orders that are larger than the value assigned to the current grouping factor
 - When PDSSA completes units, the disk space is made available for additional data from ECS

PDS (PDSIS) Order Management (Cont.)



- **“Grouping” Methodology (Cont.)**
 - **Granule-size grouping:**
 - » If the granule size limit is 35,000, an order for 600 megabytes of data would not be broken up into chunks because it is smaller than the granule size limit
 - » When the size of an order (e.g., 45,000 megabytes) is greater than the size limit, PDSIS makes a chunk of data available to PDSSA after the amount of data received from ECS reaches the size limit (35,000 megabytes)
 - **Group-limits grouping:**
 - » PDSIS makes a chunk of an order available to PDSSA when the number of units specified in the database has been received from ECS
 - » If the value for the group limit is NULL, all units are made available to PDSSA only after all unit data have been staged by ECS

PDS Order Grouping



PDSIS Control

PDSSA Control

ECS Order #

Request_ID_1 =>

PDS Order#_1

Granule_1

Granule_2

Granule_3

Granule_4

Granule_5

Granule_6

Granule_7

Granule_n

...

Request_ID_2 =>

PDS Order#_2

Granule_10

Granule_11

Granule_12

Granule_13

Unit_1

Unit_2

Unit_3

Unit_4

Unit_5

Unit_6

Unit_7

Unit_n

...

Unit_1

Unit_2

Unit_3

Unit_4

(2) Unit(s) released

(4) Unit(s) released

(3) Operator Releases
- by Order #
-or-
- by Unit(s)

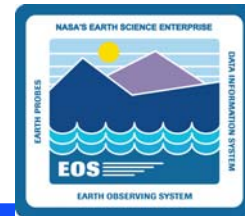
(1) Job/Chunking Limit
DAAC Configurable
35000 MB
-or-
005 units

Logging in to ECS Hosts



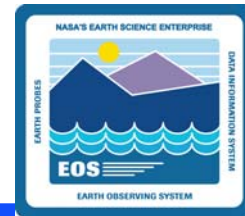
- **Logging in to ECS hosts is accomplished from a UNIX command line prompt**
 - It is an initial set of steps that is performed when accomplishing many other Data Distribution tasks
- **Procedure**
 - Access the command shell
 - Set the DISPLAY environmental variable
 - Log in to the specified host using secure shell and the specified user ID

Launching Data Distribution and Storage Management GUIs



- **Software applications associated with Data Distribution**
 - Data Distribution Operator GUI (EcDsDdistGui)
 - Distribution Server (EcDsDistributionServer)
 - Sybase ASE Server
- **Data Distribution depends on a number of related servers, especially...**
 - Science Data Server servers
 - Storage Management servers

Launching Data Distribution and Storage Management GUIs (Cont.)



- **Software applications associated with Storage Management**
 - **Storage Management Control GUI (EcDsStmgtGui)**
 - **Archive Server (EcDsStArchiveServer)**
 - **Cache Manager Server (EcDsStCacheManagerServer)**
 - **Pull Monitor (EcDsStPullMonitorServer)**
 - **Staging Disk Server (EcDsStStagingDiskServer)**
 - **8mm Server (EcDsSt8MMServer)**
 - **FTP Server (EcDsStFtpServer)**
 - **Storage Management Request Manager (EcDsStRequestManagerServer)**

Launching Data Distribution and Storage Management GUIs (Cont.)



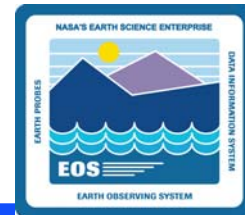
- **Software applications associated with Storage Management (Cont.)**
 - Sybase ASE Server
 - Archival Management and Storage System (AMASS)

Launching Data Distribution and Storage Management GUIs (Cont.)



- **Use UNIX command line to gain access to GUIs**
- **Procedure (Launching the Data Distribution Operator and Storage Management Control GUIs)**
 - **Access a terminal window logged in to the Operations Workstation**
 - **Change directory to the utilities directory**
 - **Enter the command to start the Data Distribution Operator GUI**
 - **Enter the command to start the Storage Management Control GUI**

Data Distribution Operator GUI: Distrib'n Requests Tab



Data Distribution Operator GUI – TS2

File Selected Edit View Options Help

Distrib'n Requests System Requests Tape IDs Preamble Editor Event Logging

Data Distribution – Track Activity

Data Distribution Requests Items: 28

Mod	Request ID	Requester	Esdt Type	Media	Priority	St
<input type="checkbox"/>	18311339657957	cnshared	MOD01.001	FtpPush	Normal	Sus
<input type="checkbox"/>	1831161630910	cnshared	MOD01.001	FtpPush	Normal	Sus
<input type="checkbox"/>	186122654949935	cnshared	MOD01.001	FtpPush	Normal	Sus
<input type="checkbox"/>	186154947328507	cnshared	MOD01.001	FtpPush	Normal	Fai
<input type="checkbox"/>	186155010722901	cnshared	MOD01.001	FtpPush	Normal	Fai
<input type="checkbox"/>	18615501258878	cnshared	MOD01.001	FtpPush	Normal	Fai
<input type="checkbox"/>	186155013779322	cnshared	MOD01.001	FtpPush	Normal	Fai
<input type="checkbox"/>	186155014844059	cnshared	MOD01.001	FtpPush	Normal	Fai
<input type="checkbox"/>	186155017274633	cnshared	MOD01.001	FtpPush	Normal	Fai
<input type="checkbox"/>	186155021922735	cnshared	MOD01.001	FtpPush	Normal	Fai
<input type="checkbox"/>	186155022611660	cnshared	MOD01.001	FtpPush	Normal	Fai
<input type="checkbox"/>	18615502369123	cnshared	MOD01.001	FtpPush	Normal	Fai
<input type="checkbox"/>	186155023709057	cnshared	MOD01.001	FtpPush	Normal	Fai
<input type="checkbox"/>	186155023837510	cnshared	MOD01.001	FtpPush	Normal	Fai
<input type="checkbox"/>	186155023856991	cnshared	MOD01.001	FtpPush	Normal	Fai
<input type="checkbox"/>	186155029404326	cnshared	MOD01.001	FtpPush	Normal	Fai
<input type="checkbox"/>	186155031312558	cnshared	MOD01.001	FtpPush	Normal	Fai

Find

Change Priority: Xpress Apply Refresh

Mark Shipped Cancel Suspend Resume Suspend New Requests Resume New Requests

Operator Messages

Storage Management Control GUI: Storage Config. Tab



Storage Management Control

File Options Backup Delete Help

Thursday May 22, 2003 07:40:36 AM Mode: TS1

Storage Config. Vol Grp Config. Resource Mngmnt. Cache Stats. Storage Events Request Status

Configuration Parameter Reporting

Server Type	# of Servers	Description	# of Re-routes
SMM	1	SMM Stacker Server	1
ARCHIVE	7	Archive Server	
CACHE MANAGER	7	Cache Management Server	
CDROM	0	CDROM Device Server	1
D3	1	D3 Device Server	1
DLT	0	DLT Stacker Server	1
DTE	1	DTE Device Server	1

Times to Re-route: [] Apply to Server Type

Server Name	Status
-------------	--------

Add Server Modify Server/View Stackers Delete Server

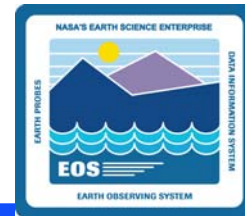
Operator Messages

Monitoring/Controlling Data Distribution Requests



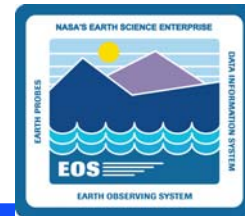
- **Data Distribution activities are monitored and controlled using....**
 - Data Distribution Operator GUI
 - Storage Management Control GUI
- **DAAC Distribution Technician monitors and manages data distribution requests primarily via the Data Distribution - Track Activity window of the Data Distribution Operator GUI**

Monitoring/Controlling Data Distribution Requests (Cont.)



- **From the Data Distribution - Track Activity window the DAAC Distribution Technician can perform the following functions:**
 - **View data distribution requests**
 - **Change the priority of a selected request**
 - **Cancel, suspend, or resume processing of a request**
 - **Filter on all or specific requests by...**
 - » **Request ID**
 - » **Requester**
 - » **Media Type**
 - » **State (current status)**

Monitoring/Controlling Data Distribution Requests (Cont.)



- **The Data Distribution - Track Activity window displays the following information (plus additional information) for each data distribution request:**
 - Request ID
 - Requester
 - ESDT Type
 - Media type
 - Priority
 - State
 - Estimated # of Media
 - Total Size [of the request]
 - # of Files

Monitoring/Controlling Data Distribution Requests (Cont.)



- **Procedure**

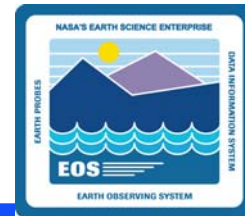
- **Configure data distribution polling (subordinate procedure)**
- **Observe data distribution request information displayed in the Data Distribution Requests list**
- **Filter requests as necessary (subordinate procedure)**
- **Change the priority of distribution requests (subordinate procedures)**
- **Change the status of distribution requests (subordinate procedures)**
 - » **Suspend requests**
 - » **Resume processing of suspended requests**
 - » **Cancel requests**
 - » **Respond to open interventions**
- **Troubleshoot distribution problems as necessary**

Configuring Data Distribution Polling



- **Refresh Options Dialogue from the GUI**
Options menu is used for...
 - **switching the Data Distribution database polling function on or off**
 - **modifying DDist Polling Rate**
 - » **specifies how often (in seconds) the system updates the information displayed in the Track Activity window**
 - **modifying Error Retry Rate**
 - » **specifies the time (in seconds) that the system waits before trying to poll the Data Server after a failed try**
 - **modifying Select Confirmation Min**
 - » **specifies the number of records that triggers a confirmation dialogue box for a selected action**
 - **modifying the Overdue Limit**
 - » **specifies the time limit (in hours) for declaring requests “overdue”**

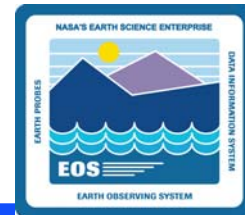
Configuring Data Distribution Polling (Cont.)



- **Procedure**

- **Select Options → System Settings from the pull-down menu of the Data Distribution Operator GUI**
- **Click on the DDist Polling On button to change the state of polling**
- **Enter value for the polling rate (if applicable)**
 - » **default value is 30 seconds**
- **Enter value for the error retry rate (if applicable)**
- **Enter value for Select Confirmation Min (if applicable)**
- **Enter value for Overdue Limit (if applicable)**
- **Click on the Ok button to apply the values and dismiss the dialogue box**

Refresh Options Dialogue Box



Refresh Options

☒ DDist Polling On **Ok** **Cancel**

DDist Polling Rate: secs

Error Retry Rate:

Select Confirmation Min: records

Overdue Limit: hours

Filtering Data Distribution Requests



- **Filtering Data Distribution Requests**
 - **Data distribution requests can be filtered with respect to the following criteria:**
 - » **request ID**
 - » **requester**
 - » **media type**
 - » **state**
 - **Procedure**
 - » **Select View → Filter**
 - » **Select filter criteria**
 - » **Click on the OK button to implement the selections and dismiss the dialogue box**

Distribution Filter Requests Dialogue Box



Distribution Filter Requests

☐ Request ID

☐ Requester

☐ All Requests

Media Type:

SMM
CDROM
DLT
FtpPull
FtpPush
DVD

All

None

State:

☐ Pending ☐ Suspended

☐ Active ☐ Suspended with Errors

☐ Staging ☐ Waiting for Shipment

☐ Transferring ☐ Shipped

☐ Cancelled ☐ Failed

All

None

OK Apply Cancel Help

Changing the Priority of Data Distribution Requests



- **Procedure**
 - Highlight the distribution request to be assigned a different priority
 - Select the new priority using the Change Priority button
 - Click on the Apply button to implement the priority change

Suspending/Resuming Data Distribution Requests



- Under certain circumstances it may be advisable to suspend the processing of a data distribution request and resume it at a later time
- Procedure
 - Click on the Suspend New Requests button to suspend all new distribution requests
 - Select the individual distribution request to be suspended and click on the Suspend button to suspend a single distribution request
 - Click on the Resume New Requests button to resume processing of all new distribution requests
 - Select the individual distribution request for which processing is to be resumed and click on the Resume button to resume processing of a single distribution request

Canceling Data Distribution Requests



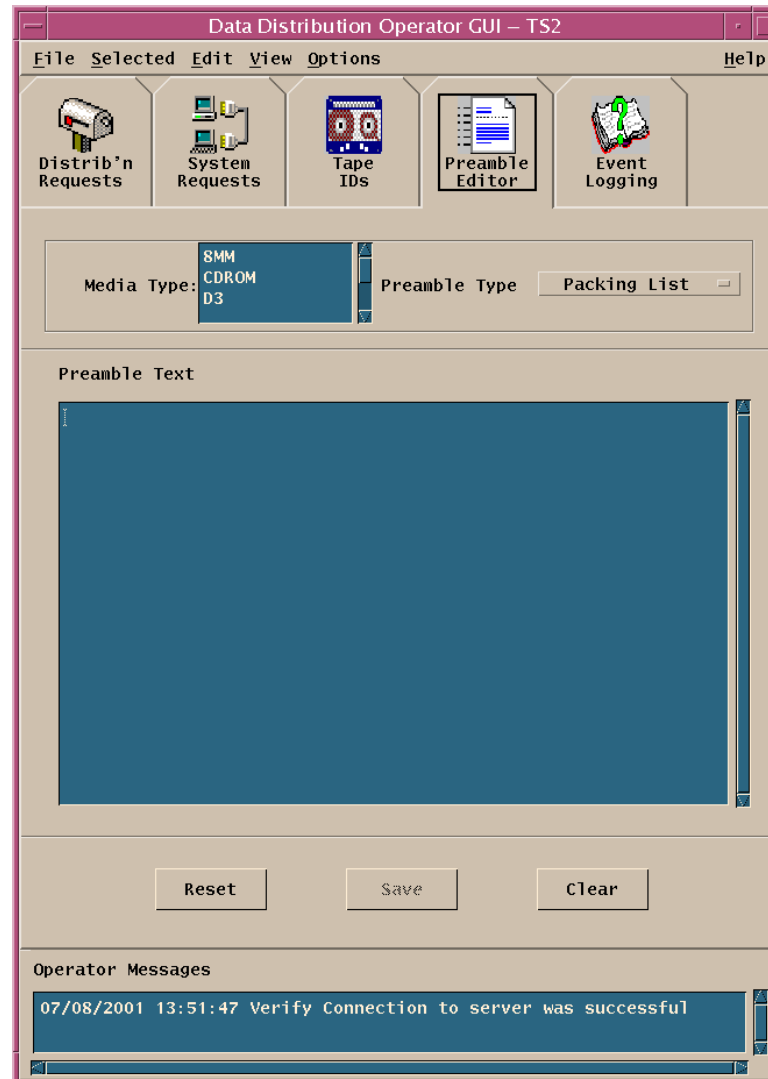
- **Sometimes it may be necessary to cancel the processing of a data distribution request**
- **Procedure**
 - **Select the distribution request to be canceled**
 - **Click on the Cancel button**

Modifying Preambles



- **Preamble Editor tab on the Data Distribution Operator GUI allows the Distribution Technician to review and/or modify the text of preambles to the following types of documents:**
 - Packing list
 - Successful e-mail
 - Failed e-mail
- **Preambles for different types of distribution are accessible in the `/usr/ecs/MODE/CUSTOM/data/DSS` directory on the Distribution Server host (Sun internal server host)**
- **Types of relevant media:**
 - Ftp pull
 - Ftp push

Data Distribution Operator GUI: Preamble Editor Tab



Data Distribution Operator GUI: FTP Push Successful E-Mail



Data Distribution Operator GUI – TS2

File Selected Edit View Options Help

Distrib'n Requests System Requests Tape IDs Preamble Editor Event Logging

Media Type: DLT FtpPull FtpPush Preamble Type: Successful Email

Preamble Text

Thank you for using the Earth Observing System Distribution System. For more information on your request contact the DAAC.

Please include the data below in any correspondence with the DAAC.

The data distributed for this request can be found on the FTPHOST below in the directory specified by FTPDIR below.

Thank You!

Reset Save Clear

Operator Messages

07/08/2001 13:51:47 Verify Connection to server was successful

Modifying Preambles (Cont.)



- **Procedure**
 - **Select the Preamble Editor tab of the Data Distribution Operator GUI**
 - **Select the appropriate media type**
 - **Select the appropriate preamble type**
 - **Edit the preamble text**
 - **Save the edited preamble**

Preamble Save Confirmation Dialogue Box



Configuring STMGT Polling & Deleting Files from Cache



- **Configuring Storage Management Polling (Storage Management Control GUI Options menu)**
 - **Switch Operator Notification Timer polling on or off**
 - **Modify parameters**
 - » **Database Polling Rate**
 - » **Error Retry Rate**

Storage Management Control GUI: Session Settings Dialogue



Session Settings

Operator Notification Timer

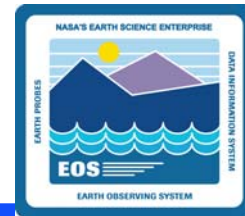
☒ Polling

Database Polling Rate: secs

Error Retry Rate: secs

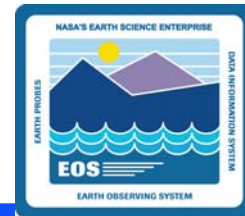
Ok Apply Cancel

Configuring STMGT Polling & Deleting Files from Cache (Cont.)



- **Configuring Storage Management Polling: Procedure**
 - **Select Options → System Settings from the pull-down menu on the Storage Management Control GUI**
 - **Set the Operator Notification Timer to the appropriate polling state (off or on) if applicable**
 - **Enter the database polling rate if applicable**
 - **Set the error retry rate if applicable**
 - **Apply the modifications**

Configuring STMGT Polling & Deleting Files from Cache (Cont.)



- **Cache Stats. tab on the Storage Management Control GUI**
 - Displays all of the files that are in the cache areas, including the Pull Monitor and other staging areas
 - Displays general statistics on the selected cache
 - Allows the operator to manually delete expired files in cache areas
 - A just-enough-cache cleanup strategy has been implemented
 - » Caches (including the Pull Area) generally remain full because each cache manager (including the cache manager that is configured as the Pull Monitor or Pull Area Manager) automatically identifies and removes just enough old files to accommodate new ones
 - » Consequently, it is likely that manual cache cleanup will not be performed very often

Storage Management Control GUI: Cache Stats. Tab



Storage Management Control

File Options Backup Delete Help

Thursday May 22, 2003 07:45:36 AM Mode: TS1

Storage Config. Vol Grp Config. Resource Mngmt. Cache Stats. Storage Events Request Status

Cache: [] Text

Cache Statistics

Current Utilization:	[]	Number of Resident Files:	[]
Used Space (Blocks):	[]	Maximum File Size (Blocks):	[]
Free Space (Blocks):	[]	Minimum File Size (Blocks):	[]
Total Space (Blocks):	[]	Average File Size (Blocks):	[]

Max Rows Returned: [1000] Prev Next

Cache Information

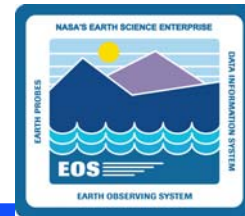
File	Last	Delete
Filename	Size	Expiration
	Accessed	Flag
		State

Mark Delete Unmark Delete Refresh

Operator Messages

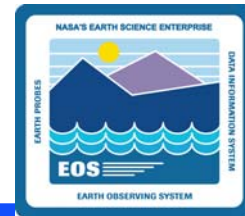
05/22/03 07:43:34 GRCleanup began at May 22 2003 7:41AM Total Rows processed

Configuring STMGT Polling & Deleting Files from Cache (Cont.)



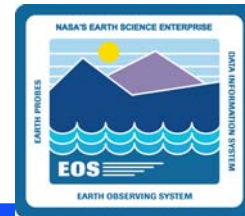
- **Deleting Files from Cache: Procedure**
 - **Select the Cache Stats. tab on the Storage Management Control GUI**
 - **Select the cache containing the files to be deleted**
 - **Select the file to be deleted from the cache**
 - **Click on the Mark Delete button**
 - **If any file has been inadvertently marked Delete, first click on the row corresponding to the file then click on the Unmark Delete button**

Configuring STMGT Polling & Deleting Files from Cache (Cont.)



- **Viewing Storage Management Event Log Information: Storage Events tab on the Storage Management Control GUI**
 - Search the Event Log
 - Obtain reports on events that have occurred in Storage Management
 - Review information concerning a particular Storage Management event
 - » Number
 - » Date
 - » Level
 - » Type
 - » Message

Configuring STMGT Polling & Deleting Files from Cache (Cont.)



- **Storage Events tab (Cont.)**
 - **Search criteria (can be used individually or in combination to view entries in the Event Log)**
 - » **Date Interval**
 - » **Event Type**
 - » **Event Level**
 - » **Message**

Storage Management Control GUI: Storage Events Tab



Storage Management Control

File Options Backup Delete Help

Thursday May 22, 2003 07:48:10 AM Mode: TS1

Storage Config. Vol Grp Config. Resource Mngmt. Cache Stats. Storage Events Request Status

Event Log Search Parameters

Begin: 05 / 22 / 2003

Date Interval:

End: 05 / 22 / 2003

Event Type: Any Event Level: Any

Message:

Max Rows Returned: 100

Search Clear Parameters

Search Records Found: 25

Event Log

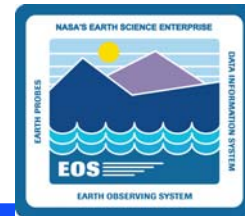
Number	Date	Level	Type	Message
1	05/22/03 03:41:49	INFO	6	CleanWhenPulled updated 0 files / 0 t
1	05/22/03 02:41:49	INFO	6	CleanWhenPulled updated 0 files / 0 t
1	05/22/03 06:41:49	INFO	6	CleanWhenPulled updated 0 files / 0 t
1	05/22/03 00:41:47	INFO	6	CleanWhenPulled updated 0 files / 0 t
1	05/22/03 05:41:49	INFO	6	CleanWhenPulled updated 0 files / 0 t
1	05/22/03 01:41:48	INFO	6	CleanWhenPulled updated 0 files / 0 t
1	05/22/03 04:41:40	INFO	6	CleanWhenPulled updated 0 files / 0 t

Purge Selected

Operator Messages

05/22/03 07:43:34 GRCleanup began at May 22 2003 7:41AM Total Rows processed

Configuring STMGT Polling & Deleting Files from Cache (Cont.)



- **Viewing Storage Management Event Log Information: Procedure**
 - Select the Storage Events tab of the Storage Management Control GUI
 - Enter the defining characteristic(s) (e.g., time period, event type, event level) of the event
 - Click on the Search button to search the event log for events that meet the specified criteria
 - Observe event information displayed in the Event Log table

Monitoring Storage Management Server Operations



- **The Request Status tab on the Storage Management Control GUI**
 - Makes it possible to monitor processing activity in all of the storage management servers for a given mode
- **Request Status Information table**
 - Lists the requests that are currently being serviced by storage management servers and those that have been completed within the last 24 hours
 - Using the Request Status tab the Distribution Technician can detect stalled requests or servers that appear to be idle

Monitoring Storage Management Server Operations (Cont.)



- **Request Status Information table contents**
 - **Operation [type of operation]**
 - **Request ID**
 - **Progress [current stage of processing]**
 - **Status**
 - **Priority**
 - **When Submitted [time and date received by the server that is responsible for the request]**
 - **Last Updated [time and date status was last updated]**

Monitoring Storage Management Server Operations (Cont.)



- **Procedure**
 - Click on the **Storage Management Control GUI Request Status** tab
 - Observe information displayed on the **Request Status** tab of the **Storage Management Control GUI**
 - If necessary, filter the list of **Storage Management** requests shown in the **Request Status Information** table by making the appropriate selection from the **Filtering** pull-down menu:
 - » **Server**
 - » **Operation**
 - » **Processing State**
 - » **Submitter**
 - Observe the **Storage Management** requests displayed in the **Request Status Information** table
 - To exit from the **Storage Management Control GUI** select **File** → **Exit** from the pull-down menu

Storage Management Control GUI: Request Status Tab



Storage Management Control

File Options Backup Delete Help

Sunday July 08, 2001 01:17:37 PM Mode: TS2

Storage Config. Vol Grp Config. Resource Mngmt. Cache Stats. Storage Events Request Status

Filtering

Request Status Information

Operation	Request ID	Progress	Status	Priority	Wh
Allocate	IngestRQ595	Checkpointed	DsEstStoredProcError	NORMAL	06
Allocate	IngestRQ594	Checkpointed	DsEstStoredProcError	NORMAL	06
Allocate	IngestRQ534	Checkpointed	DsEstStoredProcError	NORMAL	06
Allocate	IngestRQ526	Checkpointed	DsEstStoredProcError	NORMAL	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
CMRemoveLink		Checkpointed	DsEstStoredProcError	XPRESS	06
SDLinkFile		Checkpointed	DsEstFileToBeLinkNotExist	NORMAL	06
SDLinkFile		Checkpointed	DsEstFileToBeLinkNotExist	HIGH	06
SDLinkFile		Checkpointed	DsEstFileToBeLinkNotExist	HIGH	06
SDLinkFile		Checkpointed	DsEstFileToBeLinkNotExist	NORMAL	06

Operator Messages

07/08/01 13:14:53 Error purging old database entries.

Launching the Order Manager GUI (Cont.)



- **The OM GUI provides ECS operators with access to the Order Manager database**
 - **Based on web standards**
 - **Performs most of its functions by accessing the database directly, in contrast to most current ECS operator GUIs, which interface with servers**
 - **Allows operators to view and modify requests that the Order Manager Server has placed on hold because they require operator intervention**
 - **Allows operators to resubmit requests or portions of a request that failed**
 - **For Synergy III the OM GUI supplements the existing MSS Order Tracking GUI and the DDIST GUI (rather than replacing them)**

Launching the Order Manager GUI (Cont.)



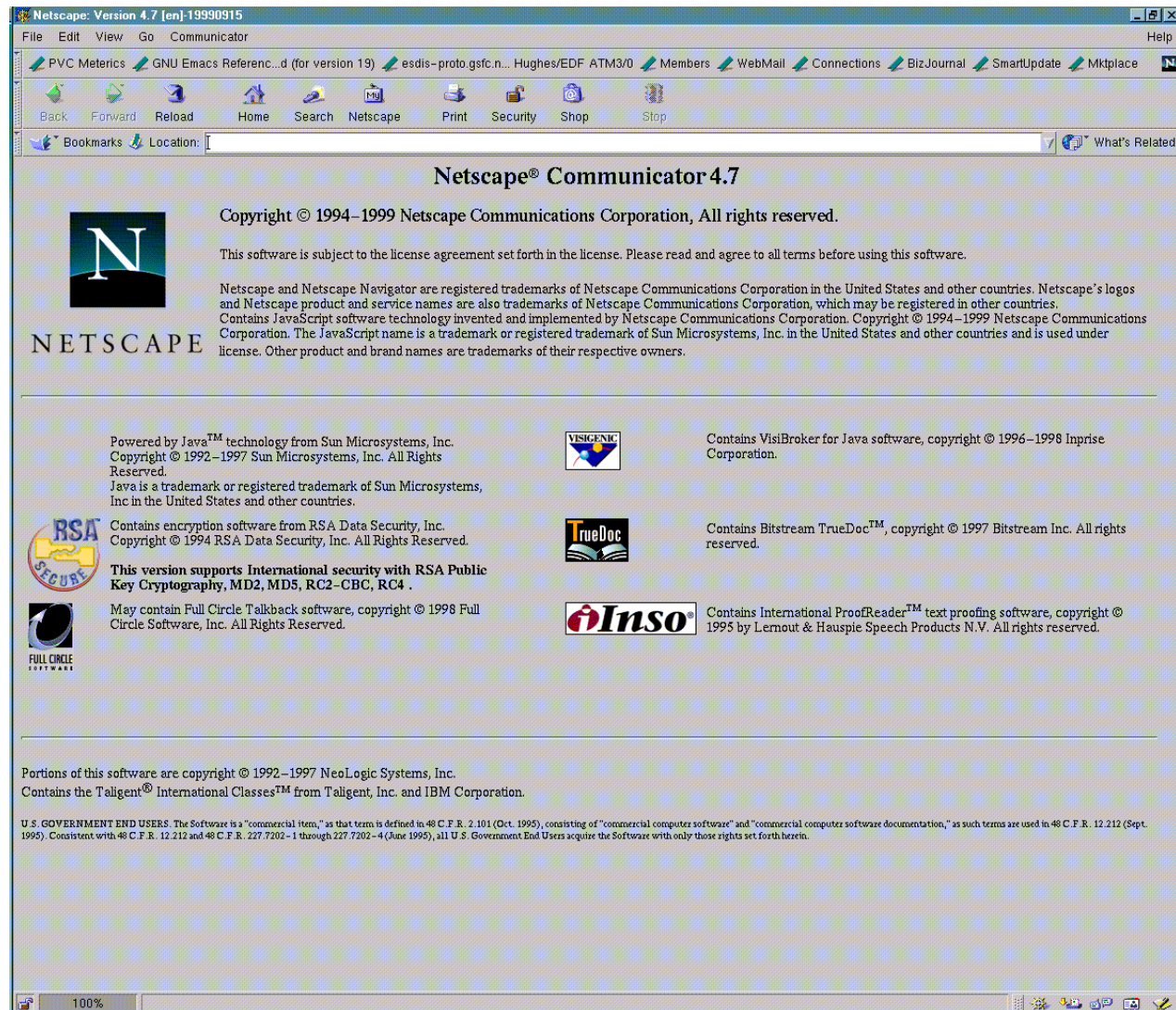
- **Some OM GUI services**
 - View status, suspend, or resume order manager queues
 - View and modify values assigned to OM Server configuration parameters
 - View and modify values assigned to parameters for the various types of distribution media
 - Monitor Order Manager Server statistics
 - Manage open interventions
 - View information concerning closed interventions
 - View a distribution request list
 - View detailed distribution request information and resubmit requests with terminal status (e.g., failed, canceled, aborted, shipped)
 - View the OM GUI log

Launching the Order Manager GUI (Cont.)



- **Procedure**
 - Log in to an appropriate host using secure shell
 - Enter the command to start the Netscape browser
 - Select the bookmark or enter the URL to access the OM GUI in the specified mode

Netscape Web Browser



Order Manager Page [“Home” Page]







Netscape: Order Manager GUI (TS2 MODE)

File Edit View Go Communicator Help

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Welcome to the...    

Order Manager Page

Request Management OM Queue Status OM Configuration OM Server Statistics OM GUI Log Viewer Help	<p>The Order Manager Page allows a DAAC operator to completely manage order distribution requests from any web browser and directly update the Order Manager Service (OMS) Database.</p> <p>Order requests can be viewed, placed on hold, resumed, modified, or monitored through this interface, and allows the operator to place an intervention on such requests. If you are new to this GUI, feel free to visit the Help page, which contains complete details on operations scenarios and other useful topics.</p>
---	--

Page not working right? Turn on your browser's JavaScript for optimum performance!

[Request Management](#) | [OM Queue Status](#) | [OM Configuration](#) | [OM Server Statistics](#) | [OM GUI Log Viewer](#) | [Help](#)

Last updated: Oct 25, 2002 -- Contact the [admin](#) for questions or comments.

Go to your personal start page

Performing Order Manager Operations



- **Order Manager Activities**
- **Distribution Technician activities involve the following OM GUI pages:**
 - **Request Management**
 - » **View Open Interventions**
 - » **View Completed Interventions**
 - » **View Distribution Requests**
 - **OM Queue Status**
 - **OM Server Statistics**
 - **OM GUI Log Viewer**
 - **OM Configuration**
 - » **Server Configuration**
 - » **Media Configuration**
 - **Help**

Performing Order Manager Operations



- **Order Manager Activities (Cont.)**
 - **The Distribution Technician performs the following major tasks:**
 - » **Responding to Open Interventions**
 - » **Resubmitting Completed Distribution Requests**
 - » **Viewing Completed Interventions**
 - » **Checking/Modifying OM Queue Status**
 - » **Monitoring Order Manager Server Statistics**
 - » **Viewing the OM GUI Log**
 - **Under certain conditions the Distribution Technician may participate in the following major task:**
 - » **Checking/Modifying OM Configuration Parameters**

Performing Order Manager Operations (Cont.)



- **Responding to Open Interventions**
 - The OM GUI - Request Management page View Open Interventions screen provides the Distribution Technician with a means of responding to open interventions
 - The View Open Interventions screen provides the Distribution Technician with a means of performing the following kinds of interventions:
 - » Select a different granule to replace a granule that is unavailable
 - » Fail selected granule(s)
 - » Disable limit checking
 - » Change the distribution medium for a request
 - » Resubmit a request
 - » Fail a request
 - » Partition (divide) a request

Performing Order Manager Operations (Cont.)



- **Responding to Open Interventions (Cont.)**
 - The response to an intervention may require coordination between the Distribution Technician and a User Services representative
 - » Especially when determining a more suitable type of distribution medium, selecting a replacement granule, or taking any other action that would require contacting the person who submitted the order
 - Depending on the circumstances and DAAC policy it may be appropriate for User Services to assume responsibility for the eventual disposition of some interventions

Performing Order Manager Operations (Cont.)



- **Responding to Open Interventions: Procedure**
 - **Select the View Open Interventions link from the OM GUI**
 - **Select the specified intervention**
 - **Select the appropriate attributes of the intervention**
 - » **Change granule DBID**
 - » **Fail granule**
 - » **Disable limit checking**
 - » **Change media type**
 - » **Resubmit request**
 - » **Fail Request**
 - » **Partition request**
 - » **Enter operator notes concerning the request**
 - **Click on the Apply Disposition Request button**
 - **Confirm the disposition of the intervention**

Performing Order Manager Operations (Cont.)



- **Responding to Open Interventions (Cont.)**
 - Ensure that the person working on the intervention is specified
 - If the order is a bundled order (Order Type “Bundled Order” or “BO”), the Order page includes a link to the Spatial Subscription Server GUI
 - “Failing” a granule is a permanent action and cannot be canceled after having been confirmed
 - The Disable limit checking option makes it possible to override the standard media capacity limits for a particular media type and is most likely to be applied to a non-physical media type (i.e., FtpPush or FtpPull)
 - » The Disable limit checking option should be used for unusually large requests only

Performing Order Manager Operations (Cont.)



- **Responding to Open Interventions (Cont.)**
 - Placing an intervention on hold does not allow changing the request's attributes, but saves the operator notes and allows opening the intervention at a later time (“saves” the intervention)
 - There are Apply Disposition Request and Reset buttons at the bottom of the Intervention page
 - » The Reset button does not cancel any changes made to the request or changes made to the DBIDs (changed or failed)
 - » It simply resets the form buttons for the Request Level Disposition section to their original states

Performing Order Manager Operations (Cont.)



- **Responding to Open Interventions (Cont.)**
 - **The Update FtpPush Parameters option appears on the confirmation page when the media type for the request is FtpPush**
 - » **The Update FtpPush Parameters option provides a means of editing the existing FtpPush information when the intervention is closed**
 - **If it was necessary to fail a request or granule(s) within a request, the confirmation page includes options for either appending additional text to the default e-mail message to be sent to the requester or choosing not to send an e-mail message**
 - » **An Additional e-mail text text box for appending text (if desired) to the standard e-mail text is displayed on the confirmation page**
 - » **A Don't send e-mail button (to suppress the sending of an e-mail message) is displayed on the confirmation page**

OM GUI - Request Management View Open Interventions Screen




Netscape: Order Manager Page (TS2 MODE) - Request Management

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Bookmarks Netsite: <http://p2dps01.pvc.ecs.nasa.gov:22421/cgi-bin/EcOmGuiOpenInterv.pl?session> What's Related

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Welcome to the...  **Order Manager Page**

[Home](#) | [Request Management](#) | [OM Queue Status](#) | [OM Configuration](#) | [OM Server Statistics](#) | [OM GUI Log Viewer](#) | [Help](#)

Wed Feb 12 13:59:31 2003

Request Management

[View Open Interventions](#) | [View Completed Interventions](#) | [View Distribution Requests](#)

-- Requests With Open Interventions --

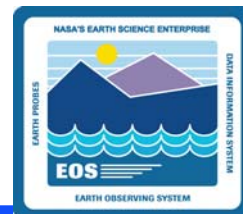
Go directly to row of 415 rows.

[first](#) | [previous](#) | Showing 1 - 50 of 415 | [next](#) | [last](#)

Order Id	Request Id	Size (MB)	Media	Status	Worked By	Created	Acknowledged	Explanation(s)
0800001104	0800001228		FtpPush	PENDING		Nov 4 2002 12:49PM		
0800001106	0800001230	11.9896	FtpPush	PENDING		Nov 4 2002 2:01PM		
0800001107	0800001231	240.8460	FtpPush	IN-WORK	jpino	Nov 4 2002 4:13PM	Nov 4 2002 4:13PM	
0800001110	0800001234	0.0000	FtpPull	PENDING		Nov 6 2002 4:39PM		Max Retry Reached Request Resubmitted
0800001111	0800001235	69.6030	FtpPull	PENDING		Nov 4 2002 2:23PM		
0800001112	0800001236	11.9896	FtpPush	PENDING		Nov 4 2002 2:40PM		
0800001115	0800001239		FtpPush	PENDING		Nov 4 2002 3:19PM		
0800001116	0800001240		FtpPush	PENDING		Nov 4 2002 3:19PM		
0800001121	0800001245	0.0000	FtpPush	PENDING		Nov 6 2002 9:11PM		
0800001124	0800001248	0.0000	FtpPull	PENDING		Nov 6 2002 9:12PM		
0800001126	0800001250		FtpPush	PENDING		Nov 5 2002 12:16PM		Max Retry Reached
0800001127	0800001251		FtpPush	PENDING		Nov 5 2002 12:16PM		Max Retry Reached
0800001128	0800001252		FtpPush	PENDING		Nov 5 2002 2:05PM		Max Retry Reached

100%

OM GUI - Request Management ECS Order Page




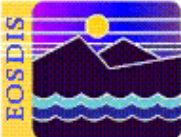
Netscape: Order Manager Page (TS2 MODE)

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Wed Feb 12 14:08:14 2003

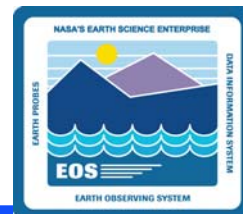
ECS ORDER 0800001206

Request ID(s): 0800001331

Order Type: Normal	Start Date: <i>Not available</i>
Order Source: V0GW-imswww-3_3b_6	User ID: ECSGuest
Receive Date: Nov 8 2002 10:27AM	Status: Canceled
Last Update: Nov 11 2002 2:59PM	Ship Date: <i>Not available</i>
Description: <i>Not available</i>	Order Home DAAC: PVC

Need help with the Order Manager? Bring up context-sensitive [help](#) for this page.

OM GUI - Request Management ECS Order Page (Bundling Order)





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Order Manager Page

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Wed Feb 12 14:12:20 2003

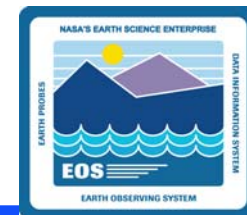
ECS ORDER 0800001389

Request ID(s): 0800001957

Order Type: Bundled Order Bundling Order ID: 0800001389 Bring up the Spatial Subscription Server for more details on bundled orders.	Start Date: <i>Not available</i>
Order Source: SSS	User ID: lillianw
Receive Date: Nov 29 2002 11:05AM	Status: Canceled
Last Update: Dec 18 2002 4:04PM	Ship Date: <i>Not available</i>
Description: <i>Not available</i>	Order Home DAAC: PVC

Need help with the Order Manager? Bring up context-sensitive [help](#) for this page.

Open Intervention Detail Page (Invalid UR)




Netscape: Order Manager Page [TS2 MODE]

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Bookmarks Netsite: <http://p2dps01.pvc.ecs.nasa.gov:22421/cgi-bin/EcoGuiOpenIntervDetail.pl?sessionId=1045595618&int...> What's Related

Welcome to the...  **Order Manager Page**

[Home](#) | [Request Management](#) | [OM Queue Status](#) | [OM Configuration](#) | [OM Server Statistics](#) | [OM GUI Log Viewer](#) | [Help](#)

Tue Feb 18 14:15:56 2003

Intervention For Request 0800003248

User Id: [cmshared](#) email: cmshared@p2ins01.pvc.ecs.nasa.gov Priority: NORMAL

Order ID	Request ID	Size (est, MB)	Media	Status	Worked by	Created	Acknowledged	Explanation
0800003674	0800003248	0.0000	FtpPush	Operator Intervention		Dec 17 2002 1:53PM		

Worked by: [Assign New Worker](#) **NOTE: You must assign a worker to this intervention before taking any actions.**

Granule List

[1](#)
[first](#) | [previous](#) | Showing 1 - 1 of 1 | [next](#) | [last](#)

DBID	ESDT	Size (MB)	Status	Explanation
80320 <input type="text"/>	MOD09A1.001	0.0000	SKIPPED	Invalid UR/Granule Not Found

[first](#) | [previous](#) | Showing 1 - 1 of 1 | [next](#) | [last](#)

Request Level Disposition

Request Attributes

☐ Disable limit checking

☐ Change Media to: New Medium

☐ Update FtpPush Parameters

Request Disposition

☒ Keep on hold ☐ Submit ☐ Fail Request ☐ Partition (current size is 0.0000 MB) ☐ and spread request over days hours

OPERATOR NOTES

100% 100% of 16K (at 2.7K/sec)

Close Confirmation for Intervention X Page







Netscape: Order Manager Page (TS2 MODE)

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Welcome to the...    

Order Manager Page

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Wed Feb 12 14:40:18 2003

CONFIRMATION FOR INTERVENTION 1000144

You are about to place on hold the intervention for request 0800001559.
Only the operator notes will be saved. You are not closing the intervention.

The following actions will be taken:

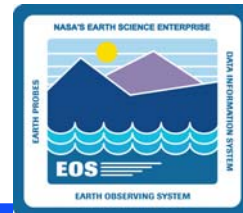
Disposition	Limit Checking Disabled	New Media
keep on hold		

Are you sure you want to take the action(s) listed above?
(Clicking the Cancel button will bring you back to the Intervention Page for this intervention ID)

OK Cancel

Need help with the Order Manager? Bring up context-sensitive [help](#) for this page.

Close Confirmation for Intervention X Page (Submit Request)







Netscape: Order Manager Page [TS2 MODE]

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Welcome to the...    

Order Manager Page

[Home](#) | [Request Management](#) | [OM Queue Status](#) | [OM Configuration](#) | [OM Server Statistics](#) | [OM GUI Log Viewer](#) | [Help](#)

Wed Feb 12 14:34:38 2003

CLOSE CONFIRMATION FOR INTERVENTION 1000144

You are about to close an operator intervention for request 0800001559.

The following actions will be taken:

Disposition	Limit Checking Disabled	New Media
submit	no	yes: (FtpPull)

Are you sure you want to take the action(s) listed above?
(Clicking the Cancel button will bring you back to the Intervention Page for this intervention ID)

OK Cancel

Need help with the Order Manager? Bring up context-sensitive [help](#) for this page.

Close Confirmation for Intervention X Page (Change to FtpPush)



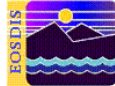
Netscape: Order Manager Page [TS2 MODE]

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Welcome to the...  **Order Manager Page**

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Wed Feb 12 14:22:54 2003

CLOSE CONFIRMATION FOR INTERVENTION 34

You are about to close an operator intervention for request 0800001317.

The following actions will be taken:

Disposition	Limit Checking Disabled	New Media
submit	no	yes: (FtpPush)

IMPORTANT - Since you are changing the media type to **FTP Push**, please provide information pertaining to its destination:

FTP Node The destination host name

FTP Address The FTP user name, a.k.a, "address"

Password

Confirm Password

User String

Destination Directory

Are you sure you want to take the action(s) listed above?
(Clicking the Cancel button will bring you back to the Intervention Page for this intervention ID)

OK Cancel

Need help with the Order Manager? Bring up context-sensitive [help](#) for this page.

Close Confirmation for Intervention X Page (Fail Request)




Netscape: Order Manager Page (TS2 MODE)

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Welcome to the...  **Order Manager Page**

[Home](#) | [Request Management](#) | [OM Queue Status](#) | [OM Configuration](#) | [OM Server Statistics](#) | [OM GUI Log Viewer](#) | [Help](#)

Wed Feb 12 14:26:50 2003

CLOSE CONFIRMATION FOR INTERVENTION 30

You are about to close an operator intervention for request 0800001320.

The following actions will be taken:

Disposition	Limit Checking Disabled	New Media
fail		

Note: For this action, you have the option of sending out an e-mail to the user. Please add any useful comments in the box below that will be appended to the standard e-mail preamble.

You may also decline to send the email by checking the box below.

This e-mail will be sent to ECSGuest at cmts2@p0ins01u.ecs.nasa.gov.

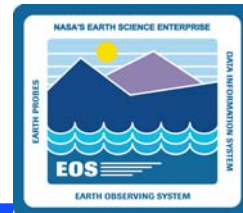
Additional e-mail text

☐ Don't send e-mail

Are you sure you want to take the action(s) listed above?
(Clicking the Cancel button will bring you back to the Intervention Page for this intervention ID)

Need help with the Order Manager? Bring up context-sensitive [help](#) for this page.

Close Confirmation for Intervention X Page (Partition Request)






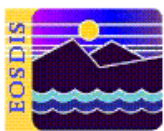
Netscape: Order Manager Page [TS2 MODE]

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Welcome to the...    

Order Manager Page

[Home](#) | [Request Management](#) | [OM Queue Status](#) | [OM Configuration](#) | [OM Server Statistics](#) | [OM GUI Log Viewer](#) | [Help](#)

Wed Feb 12 14:36:51 2003

CLOSE CONFIRMATION FOR INTERVENTION 1000144

You are about to close an operator intervention for request 0800001559.

The following actions will be taken:

Disposition	Limit Checking Disabled	New Media
partition over 12 hours	no	no

Are you sure you want to take the action(s) listed above?
(Clicking the Cancel button will bring you back to the Intervention Page for this intervention ID)

Need help with the Order Manager? Bring up context-sensitive [help](#) for this page.

Intervention Disposition Page





Netscape: Order Manager Page (TS2 MODE)

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Welcome to the...  

Order Manager Page

[Home](#) | [Request Management](#) | [OM Queue Status](#) | [OM Configuration](#) | [OM Server Statistics](#) | [OM GUI Log Viewer](#) | [Help](#)

Wed Feb 12 14:42:34 2003

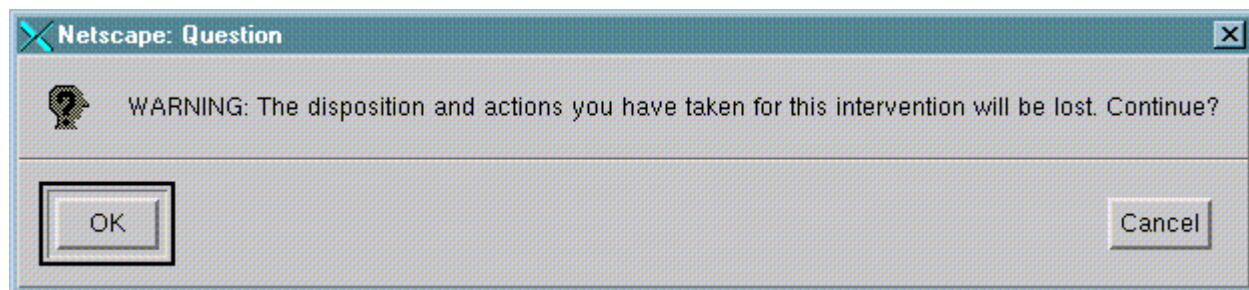
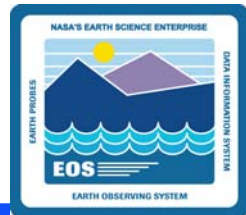
INTERVENTION PLACED ON HOLD

Intervention 1000144 has been placed on hold. The OM Database has been updated with the changes.

Go back to the [Open Interventions](#) page.

Need help with the Order Manager? Bring up context-sensitive [help](#) for this page.

Continue Question Dialogue Box



Performing Order Manager Operations (Cont.)



- **Setting Refresh Options on OM GUI Pages**
 - Buttons at the bottom of OM GUI pages provide the Distribution Technician with a means of setting refresh options.
- **Procedure**
 - Click on the appropriate radio button at the bottom of the OM GUI page
 - » Suspend refresh
 - » Auto refresh screen every x minutes
 - If the Auto refresh screen every x minutes button is selected, select the number of minutes

Performing Order Manager Operations (Cont.)



- **Resubmitting Completed Distribution Requests**
 - The OM GUI - Request Management page View Distribution Requests screen provides the Distribution Technician with a means of resubmitting completed distribution requests
 - » Only distribution requests that are in a terminal state (e.g., aborted, cancelled, terminated, or shipped) can be resubmitted
 - The procedure for resubmitting completed distribution requests assumes proper justification/authorization for resubmitting the requests

Performing Order Manager Operations (Cont.)



- **Resubmitting Completed Distribution Requests (Cont.)**
 - Resubmitting requests may require coordination between the Distribution Technician and a User Services representative
 - » Especially when changing the type of distribution medium, specifying a replacement granule, or taking any other action that would require the approval of the person who submitted the order
 - Depending on the circumstances and DAAC policy it may be appropriate for User Services to assume responsibility for resubmitting some requests

Performing Order Manager Operations (Cont.)



- **Resubmitting Completed Distribution Requests: Procedure**
 - Click on the Request Management link on the Order Manager Page ["Home" Page]
 - Click on the View Distribution Requests link on the Request Management page
 - Filter data displayed on the Distribution Requests Screen (if necessary)
 - Click on the RESUBMIT button in the Resubmit column for the row listing the request to be resubmitted
 - Select the appropriate attributes of the intervention (e.g., disable limit checking, change media type, resubmit request, partition request)
 - Click on the Apply Disposition Request button
 - Confirm the disposition of the intervention

OM GUI - Request Management Distribution Requests Screen



Netscape: Order Manager Page [TS2 MODE]

File Edit View Go Communicator Help

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Bookmarks Netsite: <http://p2dps01.pvc.ecs.nasa.gov:22421/cgi-bin/EC0mGuiDistributionRequests.pl?sessionId=1045063594> What's Related

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Welcome to the...

Order Manager Page

[Home](#) | [Request Management](#) | [OM Queue Status](#) | [OM Configuration](#) | [OM Server Statistics](#) | [OM GUI Log Viewer](#) | [Help](#)

Wed Feb 12 10:35:00 2003

Request Management

[View Open Interventions](#) | [View Completed Interventions](#) | [View Distribution Requests](#)

- Distribution Requests -

Filter Leave fields blank to return all indicated columns.

Status: ☐ ALL ☐ Abort ☐ Aborted ☐ Active ☐ Bundling

Media Type: ☐ ALL

User ID:

Request ID:

Order ID:

Creation Time: Start Month: Start Day: Start Year: Start Hour: Start Min: End Month: End Day: End Year: End Hour: End Min:

Listing

Go directly to row of 12 rows.

[first](#) | [previous](#) | Showing 1 - 12 of 12 | [next](#) | [last](#)

Order Type	OrderID	RequestID	Request Size (MB)	Granule Count	Media	Priority	Status	ESDT	UserID	Resubmit Count	Created	Last Update	Resubmit
Regular	0800008487	0800006927	0.0000	1	FtpPull	LOW	Shipped	L70R.002	ECSGuest	0	Feb 11 2003 7:08PM	Feb 11 2003 7:47PM	<input type="button" value="RESUBMIT"/>
Regular	0800008483	0800006923	0.0000	1	FtpPull	LOW	Abort	L70R.002	ECSGuest	0	Feb 11 2003 6:17PM	Feb 11 2003 6:37PM	<input type="button" value="RESUBMIT"/>
Regular	0800008482	0800006922	0.0000	1	FtpPush	LOW	Abort	L70R.002	ECSGuest	0	Feb 11 2003 5:40PM	Feb 11 2003 5:59PM	<input type="button" value="RESUBMIT"/>
Regular	0800008481	0800006921	0.0000	1	FtpPull	LOW	Abort	L70R.002	ECSGuest	0	Feb 11 2003 5:05PM	Feb 11 2003 5:23PM	<input type="button" value="RESUBMIT"/>
Regular	0800008480	0800006920	0.0000	1	FtpPush	LOW	Abort	L70R.002	ECSGuest	0	Feb 11 2003	Feb 11 2003	<input type="button" value="RESUBMIT"/>

Distribution Request Detail Page





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Wed Feb 12 14:09:52 2003

DISTRIBUTION REQUEST 0800001331

Userid	ECSGuest	Orderid	0800001206
E-mail	rfuller@eos.east.hitc.com	Order Type	Regular
Priority	LOW	Request Status	Canceled
# Granules	2	Media Type	FtpPull
Receive Date/Time	Nov 8 2002 10:27AM	Resubmit Count	2
Start Date/Time	Nov 8 2002 10:43AM		
Last Update	Nov 11 2002 2:59PM		
End Date/Time	Not available		
Request Size (MB)	2.02854		

Granule List

1

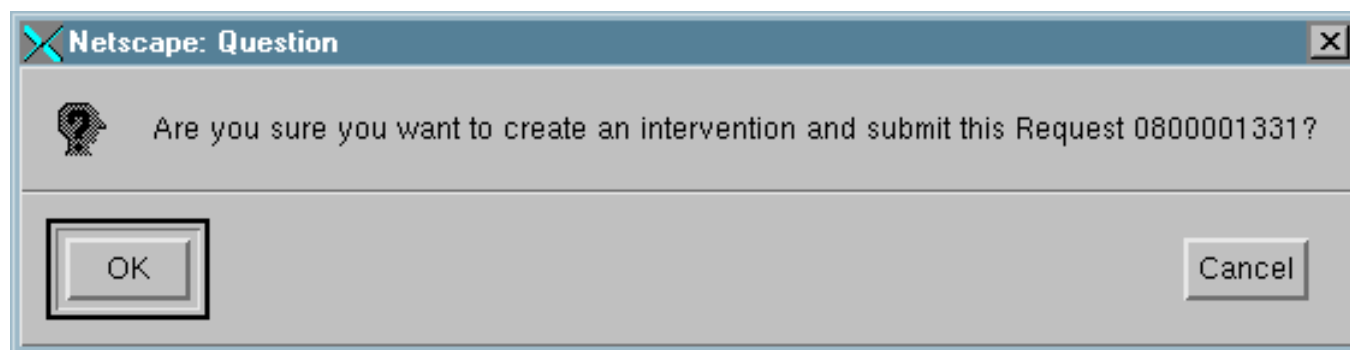
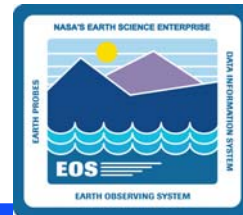
[first](#) | [previous](#) | Showing 1 - 2 of 2 | [next](#) | [last](#)

DBID	ESDT	Size(MB)	Status
58975	MOD021KM.001	1.0143	
58974	MOD021KM.001	1.0143	

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Resubmit Question Dialogue Box



Open Intervention Detail Page




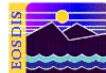
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Wed Feb 12 14:29:23 2003

Intervention For Request 0800001234

User Id: [b1d6d59b3415ed](#) email: cmits2@p0lins01u.ecs.nasa.gov Priority: LOW

Order ID	Request ID	Size (est, MB)	Media	Status	Worked by	Created	Acknowledged	Explanation
0800001110	0800001234	0.0000	FtpPull	Operator Intervention		Nov 6 2002 4:39PM		Max Retry Reached Request Resubmitted

Worked by: [Assign New Worker](#) **NOTE: You must assign a worker to this intervention before taking any actions.**

Granule List

[1](#)

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DBID	ESDT	Size (MB)	Status	Explanation
76770 <input type="text"/>	DFLAPCHM.001	0.0000		Fail this granule
Apply				
76985 <input type="text"/>	DFLAPCHM.001	0.0000		Fail this granule
Apply				
74157 <input type="text"/>	DFLAPCHM.001	0.0000		Fail this granule
Apply				

[first](#) | [previous](#) | Showing 1 - 3 of 3 | [next](#) | [last](#)

Request Level Disposition

Request Attributes

☐ Disable limit checking

☐ Change Media to: New Medium

100%

Performing Order Manager Operations (Cont.)



- **Filtering Data Displayed on the Distribution Requests Screen**
 - **Distribution Technician can filter data displayed on the Distribution Requests screen**
 - » **By default, distribution requests are sorted by “creation time,” providing access to all distribution requests created within the last 24 hours**
 - » **If it becomes necessary to restore the default filtering criteria, click on the Set Defaults button near the top of the Distribution Requests window**

Performing Order Manager Operations (Cont.)



- **Filtering Data Displayed on the Distribution Requests Screen: Procedure**
 - **Select/specify filtering criteria (as applicable)**
 - » **Request ID**
 - » **Order ID**
 - » **User ID**
 - » **Creation Time (Start Month, Start Day, Start Year, etc.)**
 - » **[Request] Status**
 - » **Media Type**
 - **Click on the Apply Filter button**

Performing Order Manager Operations (Cont.)



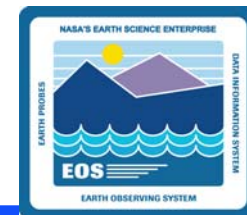
- **Viewing Completed Interventions**
 - The OM GUI - Request Management page View Completed Interventions screen provides the Distribution Technician with a means of viewing completed interventions
 - By default, completed interventions are sorted by “Completion Time,” providing access to all interventions completed within the last 24 hours

Performing Order Manager Operations (Cont.)



- **Viewing Completed Interventions: Procedure**
 - Click on the Request Management link on the Order Manager Page ["Home" Page]
 - Click on the View Completed Interventions link on the Request Management page
 - Observe information displayed in the Requests with Completed Interventions table
 - Filter data displayed on the Requests with Completed Interventions Screen (if necessary)
 - Click on a specific Request ID in the Requests with Completed Interventions table of the OM GUI - Request Management page Requests with Completed Interventions screen
 - Observe information displayed on the Completed Intervention Detail page

OM GUI - Request Management View Completed Interventions



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Wed Feb 12 13:55:26 2003

Request Management

[View Open Interventions](#) | [View Completed Interventions](#) | [View Distribution Requests](#)

--- Requests With Completed Interventions ---

Filter all completed interventions:

Start Month Start Day Start Year Start Hour Start Minute

02 11 2003 13 55

Worked By: Completion Time: End Month End Day End Year End Hour End Minute

02 12 2003 13 55

Listing

Go directly to row of 1 row.

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Order Id	Request Id	User ID	Size (MB)	Media	Worked By	Created	Completed	Disposition
0800001205	0800001330	ECSGuest	2.0285	FtpPull	cmshared	Feb 12 2003 12:49PM	Feb 12 2003 12:50PM	Fail Request

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Completed Intervention Detail Page




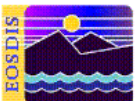
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Wed Feb 12 13:56:38 2003

COMPLETED INTERVENTION FOR REQUEST 0800001330

User Id: [ECSGuest](#) email: rfuller@eos.east.hitc.com Priority: LOW

Order ID	Size (est, MB)	Media	Worked by	Created	Acknowledged	Disposition	Explanation
0800001205	2.0285	FtpPull	cmshared	Feb 12 2003 12:49PM	Feb 12 2003 12:49PM	Fail Request	Request Resubmitted

Granule List

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DBID	ESDT	Size (MB)	Status	Explanation
59042	MOD021KM.001	1.0143	OK	
59022	MOD021KM.001	1.0143	OK	

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OPERATOR NOTES

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Performing Order Manager Operations (Cont.)



- **Filtering Data Displayed on the Requests with Completed Interventions Screen**
 - Distribution Technician can filter data displayed on the Requests with Completed Interventions screen
 - » By default, completed interventions are sorted by “Completion Time,” providing access to all interventions completed within the last 24 hours
 - » If it becomes necessary to restore the default filtering criteria, click on the Reset (Reset to Defaults) button
- **Procedure**
 - Select the filtering criteria (as applicable)
 - » Worked by
 - » Completion time
 - Click on the Apply (Apply Filter) button

Performing Order Manager Operations (Cont.)



- **Checking/Modifying OM Queue Status**
 - The OM GUI - OM Queue Status page provides the Distribution Technician with a means of checking and modifying OM queue status
 - The OM Queue Status page allows the Distribution Technician to monitor and change (if appropriate) the current status of request queues for all media as well as the request queues for PDS, SDSRV and e-mail
 - In addition, the OM Queue Status page allows the Distribution Technician to determine the status (“up” or “down”) of the Order Manager Server
 - Only authorized personnel should change the state of request queues
 - » Refer to DAAC policy or ask the supervisor to what extent or under what conditions Distribution Technicians may be authorized to change the state of request queues

Performing Order Manager Operations (Cont.)



- **Checking/Modifying OM Queue Status: Procedure**
 - **Click on the OM Queue Status link on the Order Manager Page [“Home” Page]**
 - **Observe information displayed in the Current Request Processing States table**
 - » **Look for the statement “The OM Server is: UP” (indicates that the OM Server is currently operating)**
 - » **Codes (A,S,O) indicate the status of the request queues for the following three entities: PDS, SDSRV, and EMAIL**
 - » **Codes indicate the status of the request queues for the various media types**
 - » **Although rare, if a state is not available from the database, it is listed as ERROR: State not available**
 - » **Option buttons are available for authorized operators to change the request queue states**

OM GUI - OM Queue Status Page




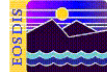
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Wed Feb 12 13:50:10 2003

OM Queue Status

Current Request Processing States

The OM Server is: UP

	PDS (S)	SDSRV (A)	EMAIL (A)
	<input type="button" value="Change State"/>	<input type="button" value="Change State"/>	<input type="button" value="Change State"/>
FtpPull (A)	--	<input type="button" value="Change State"/>	--
FtpPush (A)	--	<input type="button" value="Change State"/>	--
CDROM (S)	<input type="button" value="Change State"/>	--	--
DLT (S)	<input type="button" value="Change State"/>	--	--
DVD (S)	<input type="button" value="Change State"/>	--	--
8MM (S)	<input type="button" value="Change State"/>	--	--

Legend:
A = Active S = Suspended by Server O = Suspended by Operator

☐ Suspend refresh

☐ Auto refresh screen every minutes

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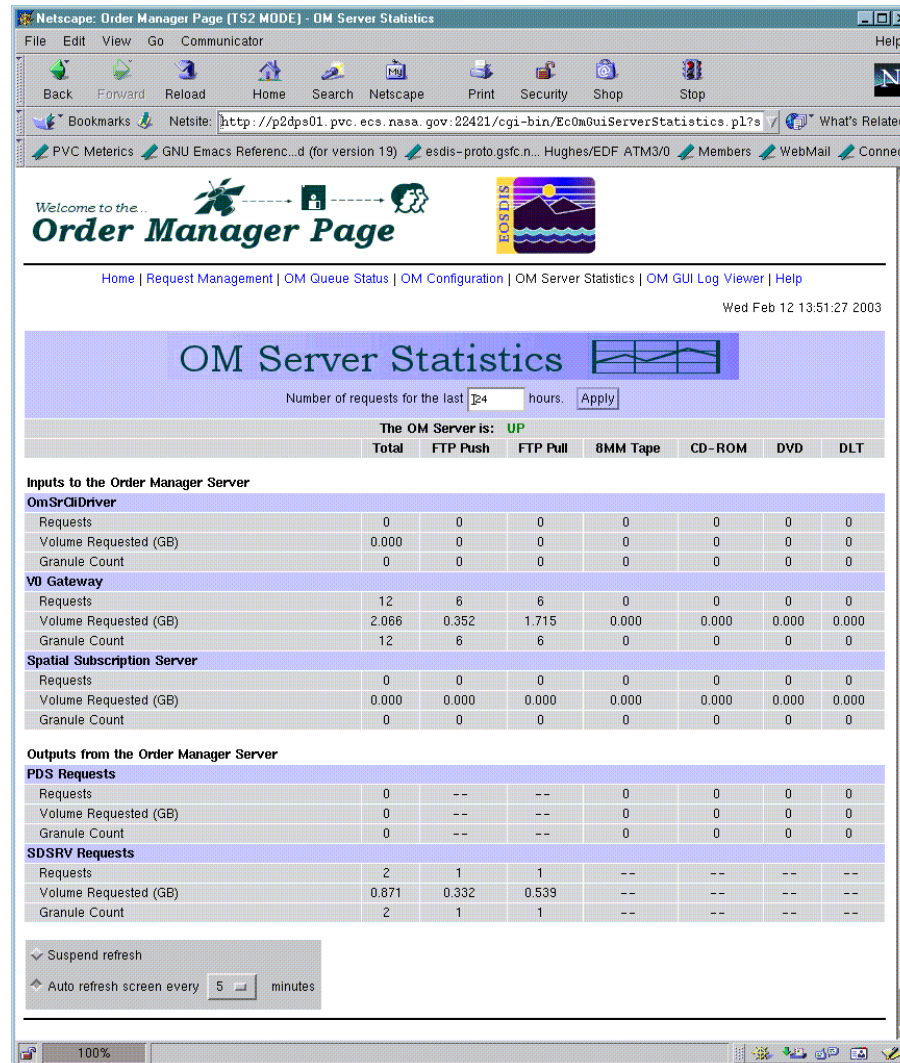
100%

Performing Order Manager Operations (Cont.)



- **Monitoring Order Manager Server Statistics**
 - The OM Server Statistics page provides the Distribution Technician with a means of monitoring Order Manager Server statistics
- **Monitoring Order Manager Server Statistics : Procedure**
 - Click on the OM Server Statistics link on the Order Manager Page [“Home” Page]
 - Observe information displayed in the OM Server Statistics table
 - » By default, the OM Server Statistics displays the number of requests for the last 24 hours

OM GUI - OM Server Statistics Page



Performing Order Manager Operations (Cont.)



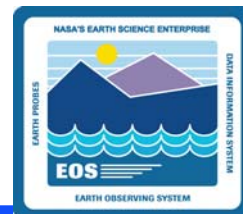
- **Viewing the OM GUI Log**
 - The OM GUI Log Viewer page provides the Distribution Technician with a means of checking entries in the OM GUI log
 - The log file (EcOmGui.log) that the log viewer displays is typically located in the `/usr/ecs/MODE/CUSTOM/WWW/OMS/cgi-bin/logs` directory on the Data Pool Server host (x0dps01)
 - » If preferred, the log file can be viewed with any UNIX editor or visualizing command (e.g., `pg`, `vi`, `view`, `more`)

Performing Order Manager Operations (Cont.)



- **Viewing the OM GUI Log : Procedure**
 - Click on the OM GUI Log Viewer link on the Order Manager Page [“Home” Page]
 - Observe information displayed in the Log Summary
 - In the “View the last ____ line(s) of the log file” text box type the appropriate number of lines to be displayed
 - » Entering 0 (zero) or leaving the text box blank indicates that the entire log file should be displayed
 - Click on the OK button
 - Observe information displayed in the log file

OM GUI Log Viewer Page




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Wed Feb 12 13:53:12 2003

Welcome to the Log Viewer

View the last line(s) of the log file.

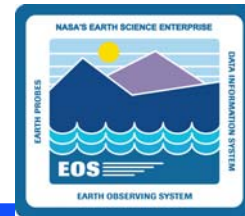
Leave blank or enter 0 to view the entire log.

Log Summary

Size: 26.715 MB
Lines: 352906
Last modified: Wed Feb 12 13:50:10 2003

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Example of OM GUI Log Contents





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Wed Feb 12 13:54:04 2003

Welcome to the Log Viewer

View the last line(s) of the log file.

Leave blank or enter 0 to view the entire log.

Log Summary

Size: 26.715 MB
Lines: 352906
Last modified: Wed Feb 12 13:50:10 2003

Viewing last 20 lines of the log file:

```
352887: Wed Feb 12 13:43:37 2003 SDSRV
352888: Wed Feb 12 13:44:21 2003 SetupFilterOptions 1 $filtStatus is ALL
352889: Wed Feb 12 13:44:21 2003 EcOmGuiDistributionRequests.pl: sql is
352890: DECLARE @Total_Requests int EXEC OmGetDistributionRequests "receiveDateTime", null,50, "Feb 11 2003 1:44PM","Feb 12 2003
1:44PM",null,"ALL",null,null,null,"N",@Total_Requests output
352891: Wed Feb 12 13:44:34 2003 SetupFilterOptions 1 $filtStatus is ALL
352892: Wed Feb 12 13:44:34 2003 EcOmGuiDistributionRequests.pl: sql is
352893: DECLARE @Total_Requests int EXEC OmGetDistributionRequests "LastStatus", null,50, "Feb 11 2003 1:44PM","Feb 12 2003
1:44PM",null,"ALL",null,null,null,"N",@Total_Requests output
352894: Wed Feb 12 13:49:22 2003 SetupFilterOptions 1 $filtStatus is ALL
352895: Wed Feb 12 13:49:22 2003 EcOmGuiDistributionRequests.pl: sql is
352896: DECLARE @Total_Requests int EXEC OmGetDistributionRequests "receiveDateTime", null,50, "Feb 11 2003 1:49PM","Feb 12 2003
1:49PM",null,"ALL",null,null,null,"N",@Total_Requests output
352897: Wed Feb 12 13:49:36 2003 SetupFilterOptions 1 $filtStatus is ALL
352898: Wed Feb 12 13:49:36 2003 EcOmGuiDistributionRequests.pl: sql is
352899: DECLARE @Total_Requests int EXEC OmGetDistributionRequests "LastStatus", null,50, "Feb 11 2003 1:49PM","Feb 12 2003
1:49PM",null,"ALL",null,null,null,"N",@Total_Requests output
352900: -----
352901: Wed Feb 12 13:50:10 2003 EcOmGuiQueueStatus.pl started
352902: sessionid => 1045075729
352903: Wed Feb 12 13:50:10 2003 In GetAllStates()...
352904: Wed Feb 12 13:50:10 2003 EMAIL
352905: Wed Feb 12 13:50:10 2003 PDS
352906: Wed Feb 12 13:50:10 2003 SDSRV
```

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100%

Performing Order Manager Operations (Cont.)



- **Checking/Modifying OM Configuration Parameters**
 - The OM GUI - OM Configuration page provides the Distribution Technician with a means of checking and modifying OM configuration parameters
 - The OM Configuration page allows viewing and changing (if necessary) the values assigned to OM Server parameters
 - » In addition, the OM Configuration page allows viewing changing (if necessary) the values assigned to parameters for the various types of distribution media
 - Only authorized personnel should modify OM configuration parameters
 - » Refer to DAAC policy or ask the supervisor to what extent or under what conditions Distribution Technicians may be authorized to modify OM configuration parameters

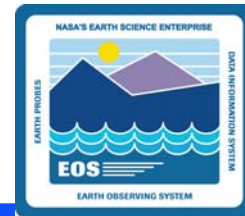
Performing Order Manager Operations (Cont.)



- **Checking/Modifying OM Configuration Parameters: Procedure**
 - Click on the OM Configuration link on the Order Manager Page [“Home” Page]
 - Observe information displayed in the Server Configuration table
 - To modify server parameter value(s)
 - » Enter the new value(s) in the text entry box(es) (in the Change to... column) for the relevant parameter(s)
 - » Click on the Apply button
 - If media parameter values are to be checked/modified, click on the Media Configuration link
 - If applicable, observe information displayed in the Media Configuration table
 - » Media parameter values are modified in the same manner as server parameter values

OM GUI - OM Configuration Page

Server Configuration Screen




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OM Configuration

[Server Configuration](#) | [Media Configuration](#)

Parameter	Current Value	Change to...	Description
Action Check Interval	2	<input type="text"/>	Time in seconds the OmServer waits before checking on actions
Action Retry Wait	2	<input type="text"/>	Time in seconds the OmServer waits before attempting to re-dispatch an action
Billing Agency Email Address	cmts2@p0ins01u.ecs.nasa.gov	<input type="text"/>	Name used by OmServer for DORRAN Emails, must be updated by EDC Personnel
Billing Agency Name	EDC	<input type="text"/>	Name used by OmServer for DORRAN Email Notifications must be updated by EDC Personnel
Child Process Time Limit	10	<input type="text"/>	Amount of time to wait to kill child process before retrying action
Cleanup Check Interval	3600	<input type="text"/>	Time in seconds the OmServer waits before performing cleanup activities
Ddist Retention Value	5	<input type="text"/>	Retention Value from DDIST SERVER in minutes
Delay Partition	1	<input type="text"/>	Time delay in hours each successive partition is supposed to be dispatched
Delete Complete Actions After	10	<input type="text"/>	Time in hours Completed Actions are maintained
Delete Complete Interventions After	10	<input type="text"/>	Time in hours Completed Interventions are maintained
Idle Sleep Time	1	<input type="text"/>	Length of time in seconds the OmServer can sleep when it has nothing to do
Max Action Retries	5	<input type="text"/>	Maximum number of times an action can be retried before the request is FAILED
Max Concurrent Requests Processed	100	<input type="text"/>	Number of concurrent requests the Om Server will process at one time
Max Request Granules	100	<input type="text"/>	Maximum number of granules a request may contain

100%

OM GUI - OM Configuration Page Media Configuration Screen




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OM Configuration

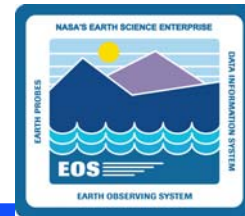
[Server Configuration](#) | [Media Configuration](#)

Media Configuration

Parameter	Current Value	Change to...
FtpPull		
Media Capacity (GB)	20	<input type="text"/>
Maximum Request Size (GB)	40	<input type="text"/>
Partition Size Limit (GB)	35	<input type="text"/>
Partition Granule Limit	3000	<input type="text"/>
FtpPush		
Media Capacity (GB)	15	<input type="text"/>
Maximum Request Size (GB)	30	<input type="text"/>
Partition Size Limit (GB)	20	<input type="text"/>
Partition Granule Limit	3000	<input type="text"/>
CDROM		
Media Capacity (GB)	0.475	<input type="text"/>
Maximum Request Size (GB)	1.2	<input type="text"/>
Partition Size Limit (GB)	1	<input type="text"/>
Partition Granule Limit	1000	<input type="text"/>
DLT		
Media Capacity (GB)	25	<input type="text"/>

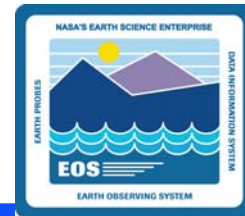
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Tuning Data Server Subsystem Parameters



- **System parameters may be subject to control by Configuration Management (CM)**
 - When making or requesting a change to system parameters, the CM process at the particular site must be followed (if applicable)
- **Two databases where parameters can be set:**
 - Configuration Registry database
 - Storage Management and Data Distribution database
- **For Storage Management servers the Registry has database connectivity information only**
 - All other configuration information is in the Storage Management and Data Distribution database and is typically entered or modified using the Storage Management Control GUI

Tuning Data Server Subsystem Parameters (Cont.)



- **Configuration Registry**
 - **Configuration Registry Server provides a single interface (via a Sybase server) for retrieving configuration attribute-value pairs for ECS servers from the Configuration Registry database**
 - » **When ECS servers are started they access the Configuration Registry database to obtain needed configuration parameters**
 - **Database Administrator has access to a Configuration Registry GUI for viewing and editing configuration data in the database**
 - **It is necessary to coordinate with the Database Administrator when changes to configuration parameters are needed**
 - **Changes to configuration-controlled parameters are subject to approval through the site CM process**

Tuning Data Server Subsystem Parameters (Cont.)



- **Default and adjusted values assigned to system parameters vary from site to site**
 - **For guidance concerning the assignment of values to parameters included in the Configuration Registry refer to document 910-TDA-022, Custom Code Configuration Parameters for ECS**
 - » **Document is available at <http://cmdm.east.hitc.com/baseline/> under “Technical Documents”**

Tuning Data Server Subsystem Parameters (Cont.)



- **Parameters whose values may be modified to enhance system functioning or performance**
 - **AppLogSize [parameter applies to all servers]**
 - » **Maximum size of the application log (ALOG) file for a particular application**
 - » **Recommended size varies considerably depending the nature of the application for which the file is being written**
 - **AppLogLevel [parameter applies to all servers]**
 - » **Level of detail provided in the ALOG file for a particular application**
 - » **Acceptable values are 0, 1, 2, or 3**
 - » **A setting of “0” provides the most data**

Tuning Data Server Subsystem Parameters (Cont.)



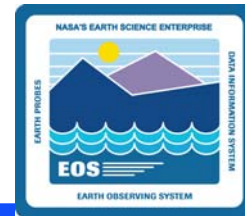
- **Tuning parameters (Cont.)**
 - **DebugLevel [parameter applies to all servers]**
 - » **Level of detail provided in the debug log file for a particular application**
 - » **Normally acceptable values are 0, 1, 2, or 3**
 - » **A setting of "0" turns off logging; a setting of "3" provides a significant amount of data**
 - » **STMGT offers "enhanced" debugging based on bitmaps [Level 7 (the 4 bit) provides detailed database debugging; Level 15 (the 8 bit) frequently dumps the in-memory request queue (in the Request Manager)]**
 - » **Both Level 7 and Level 15 quickly create enormous log files**

Tuning Data Server Subsystem Parameters (Cont.)



- **Tuning parameters (Cont.)**
 - **DBMaxConnections [EcDsDistributionServer and EcDsDdistGui parameter]**
 - » **Maximum number of database open connections (e.g., 15) allowed a particular application**
 - » **Increasing the assigned value may prevent other applications from getting access to the database**
 - **FtpPushThreshold [EcDsDistributionServer parameter]**
 - » **Maximum number of bytes (e.g., 15000000000) per distribution request via ftp push**
 - » **The FtpPushThreshold should always be greater than the size of the largest input granule used by the Planning and Data Processing Subsystems (PDPS)**
 - » **When a distribution request exceeds the threshold the request is suspended in DDIST**

Tuning Data Server Subsystem Parameters (Cont.)



- **Tuning parameters (Cont.)**
 - **FtpPullThreshold [EcDsDistributionServer parameter]**
 - » **Maximum number of bytes (e.g., 20000000000) per distribution request via ftp pull**
 - » **When a distribution request exceeds the threshold the request is suspended in DDIST**
 - **RETRIEVAL_CHUNK_SIZE [EcDsDistributionServer parameter]**
 - » **Number of per-request archived files (e.g., 40) to be retrieved from the archive server**
 - » **Must be greater than zero (0)**
 - » **Should not be greater than half the number of service threads used by the STMGT cache managers for archive reading**

Tuning Data Server Subsystem Parameters (Cont.)



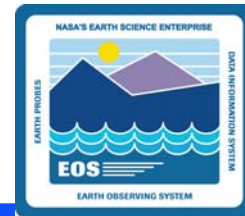
- **Tuning parameters (Cont.)**
 - **SocketLimit [EcDsDistributionServer parameter]**
 - » Number of connections (e.g., 620) to a server through the Hubble Space Telescope (HST) sockets middleware
 - » Too low a number misses connections
 - » Too high a number may adversely affect the memory of the server's host

Tuning Data Server Subsystem Parameters (Cont.)



- **When the value assigned to a parameter has been changed and saved in the Configuration Registry, the modified value does not take effect until the affected server has been restarted**
- **Example**
 - **Debug level for the Distribution Server log has been changed from “2” to “3” in the Configuration Registry**
 - **Modification does not affect the recording of data in the log until after a warm restart of the Distribution Server (at which time the server would read the parameters in the Configuration Registry)**

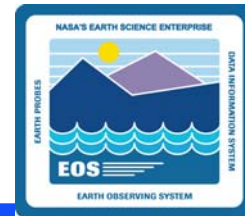
Modifying System Parameters in the STMGT/DDIST Database



- **Checksum Status**

- It is possible to have a CRC-32 checksum calculated for each file stored (inserted) in archive
- There is an option for having a checksum computed for each file retrieved from the archive and validating it by comparing it with the checksum previously computed
- The DsStArchiveServer database table has entries for each archive server (EcDsStArchiveServer) that control whether or not a checksum is calculated for each file inserted into or retrieved from the archive
- Checksums are calculated on retrieval only when the file is first moved from the archive to the read-only cache
 - » As long as the file remains resident in the read-only cache, the checksum is not recalculated

Modifying System Parameters in the STMGT/DDIST Database



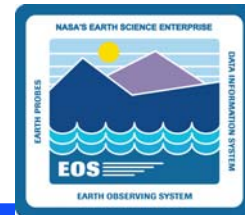
- **Checksum Status (Cont.)**
 - Checksum calculation is a highly time-consuming process, and makes intensive use of central processing unit (CPU) resources
 - » Check-summing is typically disabled during normal operations
 - The status of check-summing (i.e., enabled or disabled) is determined by the values assigned to individual archive servers in the following two columns of the DsStArchiveServer table in the STMGT/DDIST database:
 - » IsRetrieveCksumEnabled
 - » IsStoreCksumEnabled
 - The values are set (and can be checked) using the Storage Config. tab of the Storage Management Control GUI

Modifying System Parameters in the STMGT/DDIST Database



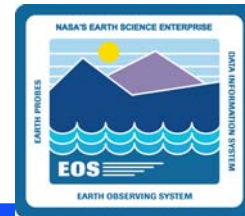
- **Staging Area Size and Read-Only Cache Size**
 - Prior to Release 6A the TotalSpace column in the Storage Management and Data Distribution database indicated the total size of raid allocated to a cache manager and staging disk combined
 - Now cache and staging disk space requirements are defined in separate columns in different database tables
 - The TotalStagingSpace column in the DsStStagingDiskServer table contains the overall size of the space (in blocks) available for a staging disk
 - The TotalCacheSpace column in the DsStCache table contains the overall size (in blocks) of a cache

Modifying System Parameters in the STMGT/DDIST Database



- **Staging Area Size and Read-Only Cache Size (Cont.)**
 - The TotalStagingSpace column should reflect the available disk space in the file partition that is configured
 - The TotalCacheSpace column is seen as "Original Cache Space" from the Storage Management Control GUI
 - » The value assigned to the cache manager that is configured as the Pull Monitor (Pull Area Manager) should be the size (in blocks) of the partition that houses the Pull Area
 - » If the value assigned to the Pull Monitor (Pull Area Manager) is changed while there are files in the Pull Area, the value should be higher than the cumulative size of files in the cache

Modifying System Parameters in the STMGT/DDIST Database



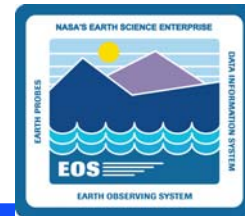
- **Staging Area Size and Read-Only Cache Size (Cont.)**
 - **In Storage Management configurations...**
 - » **Capacity ("space") is consistently specified in blocks**
 - » **File size is specified in bytes**
 - **Each cache has its own path**

Modifying System Parameters in the STMGT/DDIST Database



- **Staging Area Size and Read-Only Cache Size (Cont.)**
 - **Comparison of staging disk and cache paths:**
 - » **EcDsStCacheManagerServerACM1 cache path:**
/usr/ecs/OPS/CUSTOM/apc/x0acg01/data/staging/cache
[The cache area used to be identified as "user1"]
 - » **EcDsStStagingDiskServerACM1 root path:**
/usr/ecs/OPS/CUSTOM/apc/x0acg01/data/staging//disks
[Each staging disk has a unique number (e.g., disk1132), even across servers]
 - **Cache and staging disk space parameters are modified using the Storage Management Control GUI**

Modifying System Parameters in the STMGT/DDIST Database



- **Setting Expiration Thresholds for Cache Managers**
 - In Release 6A a just-enough-cache cleanup strategy was implemented
 - » Caches (including the Pull Area) generally remain full because each cache manager identifies and removes just enough old files to accommodate new ones
 - Prior to Release 6A the PullExpirationTime column in the Storage Management and Data Distribution database indicated the number of hours after which files could be considered for deletion
 - Now the ExpirationThreshold column in the DsStCache table contains the number of hours it takes for files to expire in each cache area
 - » The ExpirationThreshold for the cache manager configured as the Pull Monitor specifies the number of hours it takes for files to expire in the Pull Area

Modifying System Parameters in the STMGT/DDIST Database



- **Setting Expiration Thresholds for Cache Managers (Cont.)**
 - **Factors considered when setting the ExpirationThreshold for each cache manager:**
 - » **ExpirationThreshold specifies the number of hours a lien will be held against a cached file**
 - » **If a lien expires and space is required, the lien will be automatically removed unless the ConfirmDelete flag (for expired files) is set to "Yes"**
 - » **ExpirationThreshold entries are typically set at 72 (hours) but may be set at some other value (usually in the range of 24 - 72)**
 - » **Too short a time limits the ability of users to get their data before it is deleted (if ConfirmDelete is set to "No")**
 - » **Too long a time increases the chance of filling up the cache**

Modifying System Parameters in the STMGT/DDIST Database



- **Setting Expiration Thresholds for Cache Managers (Cont.)**
 - The **ConfirmDelete** column in the **DsStCache** table is a flag that indicates whether to automatically delete upon reaching the **ExpirationThreshold**
 - » **ConfirmDelete** is typically set to "No" (do not require confirmation before deleting)
 - Files are pulled to the Pull Area by the Pull Monitor (Pull Area Manager); they are not pushed there by the ftp server
 - The Fault Level and Warning Level parameters are ignored
 - Expiration thresholds and **ConfirmDelete** flags for expired files are modified using the Storage Management Control GUI

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **Storage Management Service Thread Allocation**
 - **Service threads are not the same as listen threads**
 - » **Listen threads are specific to the Distributed Computing Environment (DCE)**
 - **Service threads process requests submitted to the applicable server, for example...**
 - » **EcDsStRequestManagerServer**
 - » **EcDsStArchiveServer**
 - » **EcDsStCacheManagerServer**
 - » **EcDsStStagingDiskServer**
 - » **EcDsStFtpServer**
 - **The number of service threads assigned to a server should be set on the basis of the resources available and the server throughput**

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **Storage Management Service Thread Allocation (Cont.)**
 - The **DsStServiceThreadConfig** database table contains the number, types, and priorities of service threads for Storage Management servers
 - The following columns indicate the number of service threads assigned to each priority:
 - » **XpressThreads**
 - » **VhighThreads**
 - » **HighThreads**
 - » **NormalThreads**
 - » **LowThreads**

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **Storage Management Service Thread Allocation (Cont.)**
 - The PoolType column (DsStServiceThreadConfig database table) identifies the type of threads within a certain pool applicable to the server
 - » Service Threads
 - » Read Threads
 - » Write Threads
 - In Storage Management Read Threads and Write Threads apply to the archive servers only
 - The NumThreads column contains the number of threads in a particular pool
 - Storage Management service thread-related values are modified using the Storage Management Control GUI

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



Representative Default Values Listed in the DsStServiceThreadConfig Database Table

ServerId	PoolType	Num Threads	Xpress Threads	Vhigh Threads	High Threads	Normal Threads	Low Threads
1	ReadThreadPool	30	0	10	10	0	10
1	ThreadPool	30	0	10	10	0	10
1	WriteThreadPool	30	0	10	10	0	10
2	ReadThreadPool	10	0	0	0	0	10
2	ThreadPool	50	0	10	10	0	30
2	WriteThreadPool	100	0	20	70	0	10

- **ServerId 1** refers to **EcDsStArchiveServerACM4**
- **ServerId 2** refers to **EcDsStArchiveServerDRP3**

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **Data Distribution Priority Thread Allocation**
 - Data Distribution (DDIST) has been enhanced to support a DAAC-configurable number of thread pools with each pool having a separate thread limit
 - The pools are defined in a new DDIST database table called **DsDdThreadPool**
 - » Each row in the table contains a unique pool identifier, a thread pool name, and the number of threads (thread limit) associated with the pool

Example of DsDdThreadPool Table Contents

ThreadPoolId	ThreadPoolName	ThreadLimit
1	MODAPS	20
2	DLT_ORDERS	2
3	DEFAULT	30

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **There is always a DEFAULT pool in the DsDdThreadPool table**
 - A distribution request that fails to match any of the other rules for assigning requests to thread pools is automatically assigned to the DEFAULT pool
- **Rules for assigning requests to thread pools are specified in the DsDdAssignmentRule table**
 - Rules are DAAC-configurable and are based on request attributes
 - Attributes involved in thread pool assignments:
 - » ECSUserId
 - » Priority
 - » EsdtType
 - » MediaType

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- Each row in the DsDdAssignmentRule table defines an assignment rule

Example of DsDdAssignmentRule Table Contents

SeqNum	EcsUserId	Priority	EsdtType	MediaType	ThreadPoolId
100	Robbie	ANY	ANY	FtpPush	1
200	ANY	ANY	ANY	DLT	2

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **For each new request, the rules (in the DsDdAssignmentRule table) are evaluated in order by SeqNum**
 - **When a rule is found where all conditions evaluate to true, the request is assigned to the pool specified in the ThreadPoolId column**
 - **A rule evaluates to true if the values of the request attributes (i.e., ECSUserId, Priority, EsdtType, and MediaType) match the values contained in the rule's row in the table**
 - » **A value of "ANY" automatically evaluates to true for that attribute**
 - » **Any requests that fail to match any of the rules are assigned to the DEFAULT thread pool**

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **When DDIST receives a request, a stored procedure executes to assign the request to the appropriate thread pool based on the rules contained in the DsDdAssignmentRule table**
 - **Once all threads in a given thread pool have been allocated, new requests assigned to that pool are put in a "pending" state until a thread becomes available**
 - **Requests are no longer automatically assigned to threads in other pools if there are no available threads in their assigned pool**
 - **Pending requests for each pool are activated in first-in-first-out order by request priority**

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **DAACs may adjust configurations by updating the DsDdThreadPool and DsDdAssignmentRule tables**
 - **Assignment rules may be added, deleted or updated at any time without warm-starting DDIST**
 - » **Changes to assignment rules take effect immediately upon being entered in the database**
 - » **All new requests entering DDIST are subject to the updated rules**
 - **The ThreadLimit attribute in the DsDdThreadPool table may be dynamically changed as well**
 - » **The DDIST server reloads thread limits every 90 seconds so thread limit changes take effect within 90 seconds after being entered**
 - » **New thread pools can be added by inserting rows in the DsDdThreadPool table; however, they are not used until the DDIST server is warm-started**

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **A thread pool can be deleted as long as ...**
 - **There are no rules in the DsDdAssignmentRule table that point to the thread pool**
- AND**
- **All requests that have been assigned to the thread pool have been completed and have migrated out of the DDIST database**
- **When DDIST is warm-started, all requests are reassigned to thread pools based on the current set of rules**

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- If necessary, it is possible to reassign requests after they have been assigned to a thread pool
 - Update the rules in the DsDdAssignmentRule table as necessary to ensure that the request will be assigned to the desired thread pool
 - Warm-start DDIST (EcDsDistributionServer)
- There is no GUI support for making changes to the thread pool configuration
 - Thread pool configuration changes are made by a DAAC DBA using the isql interface to update the DsDdThreadPool and DsDdAssignmentRule tables in the database

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **Guidelines for tuning DDIST priority thread allocation:**
 - In most cases, each FtpPush destination site should have its own thread pool
 - For each FtpPush destination, the DAAC should determine the number of concurrent file transfers it takes to fully utilize the available network bandwidth
 - » The number represents a parameter called "MaxTransfers"
 - For subscription-based FtpPush distribution, the thread limit for the associated thread pool should be set to 130% of MaxTransfers (rounded up)
 - » This should provide a sufficient number of threads to utilize the available network bandwidth plus allow for one or more threads to be concurrently staging data out of the AMASS cache

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **Guidelines for tuning DDIST priority thread allocation (Cont.):**
 - **For non-subscription-based FtpPush distribution, the thread limit for the associated thread pool should be set to 200% of MaxTransfers (rounded up)**
 - » **This should provide sufficient threads to utilize the available network bandwidth plus allow for staging of data from archive tapes**
 - **The total number of threads in DsDdThreadPool (i.e., sum of ThreadLimit for all rows) represents the maximum number of threads that can be active concurrently in DDIST**
 - » **The total must be less than the number of worker threads configured for DDIST**
 - » **The default number of worker threads configured for DDIST is 228**

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **Guidelines for tuning DDIST priority thread allocation (Cont.):**
 - Although DDIST thread pools can be configured around request attributes other than priority, it is important to remember that STMGT CacheManager thread pools are organized by priority
 - » Consequently, it is important to ensure that STMGT thread pools are configured to optimally handle the likely mix of request priorities
 - During warm-start, it takes DDIST 0.83 second to recover each active or pending request
 - » Consequently, for a 2000-request backlog, it takes DDIST approximately 28 minutes to reach the end of start monitoring and begin accepting new requests
 - » However, note that DDIST immediately begins to work off its request backlog as requests are assigned to thread pools

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **Modifying System Parameters in the Database Using the Storage Management Control GUI**
 - As previously mentioned the effects on system functioning and performance must be considered before modifying system parameters
 - When making or requesting a change to system parameters, the CM process at the particular site must be followed (if applicable)
 - Depending on circumstances (e.g., operator permissions) at a particular site, it may be necessary to request that someone else make parameter modifications using the Storage Management Control GUI

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **Modifying System Parameters in the Database Using the Storage Management Control GUI: Procedure**
 - Click on the appropriate server type in the Server Type Information window on the Storage Config. tab
 - Click on the appropriate server in the server information window
 - Click on the Modify Server/View Stackers button
 - Enter modified data in relevant field(s) as necessary
 - If service threads are to be allocated by priority, type the desired values in the appropriate fields in the Service Threads: Allocate by Priority window
 - When new values have been entered in all fields to be modified, click on the OK button

Cache Manager Server Configuration Dialogue



Cache Manager Server Configuration

Server Name: CacheManagerServer RPC Tag:

Original Cache Space (blocks): <input type="text" value="5000000"/>	Disk Capacity
Available Cache Space (blocks): <input type="text" value="4789662"/>	Fault Level: <input type="text" value="80.000000"/> ▲▼
Allocation Block Size (bytes): <input type="text" value="1024"/>	Warning Level: <input type="text" value="40.000000"/> ▲▼
Description: <input type="text" value="Cache Manager"/>	

Expiration Threshold (hours): <input type="text" value="10.000000"/> ▲▼	File I/O Block Size (bytes): <input type="text" value="4194304"/>
Expired Files Confirm Delete: <input type="text" value="No"/>	Retries: <input type="text" value="1"/> ▲▼
	Sleeptime (seconds): <input type="text" value="10"/> ▲▼
Service Threads: <input type="text" value="40"/>	<input type="button" value="Allocate by Priority"/>

Cache Path:

User Request Directory:

FTP Notification File:

FTP Notification Freq (Sec): ▲▼

Service Threads: Allocate Threads by Priority Window



Service Threads

Allocate Threads by Priority

XPress:	0
V-High:	0
High:	0
Normal:	0
Low:	40
Total:	40

OK Cancel

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **Modifying System Parameters in the Storage Management and Data Distribution Database Using ISQL**
 - Effects on system functioning and performance must be considered before modifying system parameters
 - When making or requesting a change to system parameters, the CM process at the particular site must be followed (if applicable)
 - Depending on circumstances at a particular site, it may be necessary to request that the Database Administrator modify database parameters

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **Modifying System Parameters in the Storage Management and Data Distribution Database Using ISQL (Cont.)**
 - The procedures vary somewhat depending on what database table is to be modified
 - Modifications can be made to the **DsDdAssignmentRule** table at any time
 - » As described in the procedure for Modifying System Parameters in the Storage Management and Data Distribution Database Using ISQL
 - » If the Distribution Server is running when the table is updated, the changes will take effect immediately (i.e., any new distribution requests will be allocated to a thread pool using the updated rules)
 - » Consequently, rule changes must be self-consistent and are typically made within the scope of a single Sybase transaction

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **Modifying System Parameters in the Storage Management and Data Distribution Database Using ISQL (Cont.)**
 - **Modifications to the DsDdThreadPool table must be made while the Distribution Server is idle**
 - » **As described in the procedure for Modifying Parameters in the DsDdThreadPool Table Using ISQL**

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **Modifying System Parameters in the Database Using ISQL: Procedure**
 - Access a terminal window logged in to the Access/Process Coordinators (APC) Server
 - Log in to isql
 - Specify the proper database name
 - Check the current contents of the relevant table
 - Update/delete/add the appropriate row(s) in the relevant table
 - Verify modifications to the database by checking the current contents of the relevant columns in the appropriate table
 - Quit isql

Modifying System Parameters in the STMGT/DDIST Database (Cont.)



- **Modifying Parameters in the DsDdThreadPool Table Using ISQL: Procedure**
 - If applicable, update the rules in the DsDdAssignmentRule table
 - If applicable, wait until all requests in the thread pool have been completed before continuing
 - Make a request to the Operations Controller/System Administrator to stop the Distribution Server
 - If applicable, use isql to set the ThreadLimit in the DsDdThreadPool table to zero
 - If applicable, modify the DsDdThreadPool table using isql
 - Make a request for a warm start of the Distribution Server
 - If applicable, use isql to delete the relevant row from DsDdThreadPool table

Troubleshooting DDIST and Order Manager GUI Problems



- **Troubleshooting:**

**process of identifying the source of problems
on the basis of observed trouble symptoms**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Problems with data distribution can usually be traced to...**
 - **some part of the Data Server Subsystem**
 - » **Data Server Subsystem (DSS)**
 - » **Science Data Server**
 - » **Storage Management**
 - **problems in other ECS subsystems, including (but not necessarily limited to):**
 - » **Communications Subsystem (CSS)**
 - » **System Management Subsystem (MSS)**
 - » **Order Manager Subsystem (OMS)**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery**

- Each request that crosses a client/server boundary is assigned a system-unique identifier referred to as an RPC ID
- The RPC ID facilitates the automatic fault recovery events that occur whenever there is a client or server failure
- As a request propagates through the system, each associated client/server exchange is assigned a unique RPC ID
 - » The RPC ID for each interaction is derived from the previous RPC ID received by the client for the request; consequently, all RPC IDs associated with a given request have a common portion that relates the various client/server calls to one another
 - » Given the previous RPC ID, clients consistently reproduce the same RPC ID that was submitted to the server on the subsequent event

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery (Cont.)**
 - **The concept of reproducible RPC IDs is central to the ECS fault recovery capability**
 - » **When requests are retried from client to server, they are always submitted with the same RPC ID that was used in the original submission of the request, even if either client or server has crashed between retries**
 - **The RPC ID is also central to the check-pointing aspect of fault recovery**
 - » **As requests arrive at fault recovery-enabled servers, they are recorded in a persistent store (typically a database), tagged with the RPC ID**
 - » **As the request is serviced, check-pointing state information may be updated in the persistent store, up to and including the request's completion status**
 - » **This allows the servers to resume servicing from the last check-pointed state, particularly upon resubmission from a client**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery (Cont.)**
 - **DSS and OMS components check-point the following types of information:**
 - » **EcDsScienceDataServer - Asynchronous “acquire” requests that have been accepted for processing and subscription server event notifications**
 - » **EcDsHdfEosServer - None**
 - » **EcDsDistributionServer - Requests (which have been accepted for processing)**
 - » **EcDsStArchiveServer - “Store” and “retrieve” request state information**
 - » **EcDsStStagingDiskServer - Resource allocation and ownership for staging disks**
 - » **EcDsStFtpServer - Request state information**
 - » **EcDsStCacheManagerServer - None**
 - » **EcDsStDTFServer - None**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery (Cont.)**
 - **DSS and OMS components check-point the following types of information (Cont.):**
 - » **EcDsStRequestManagerServer - None**
 - » **EcOmOrderManager - Requests (which have been submitted)**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Fault Handling**
 - **Failure events are classified according to the following three severity levels:**
 - » **Fatal error**
 - » **Retry error**
 - » **Warning**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Fault Handling (Cont.)**
 - **Fatal error is returned when a request cannot be serviced, even with operator intervention**
 - » **For example, if a request is made to distribute data via ftp to a non-existent host, the request is failed**
 - **Retry error is a potentially recoverable error**
 - » **Normally, a retry error would be returned to the client only when the server cannot recover from the error automatically**
 - » **A retry error may require operator assistance**
 - » **For example, the Distribution Technician would use the DDIST GUI to manually request resumption of a request that had been “suspended with errors”**
 - **Warning is provided when operations can proceed but an unexpected circumstance was detected**
 - » **For example, if a client requests removal of a file but the file does not exist**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



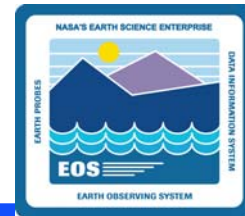
- **Fault Recovery: Fault Handling (Cont.)**
 - **Transient errors (such as network errors) are always retry errors**
 - » **In general, clients and servers that experience transient retry errors first attempt to recover by retrying the operation automatically**
 - » **One special case of this is “rebinding,” which refers to the process by which a client automatically attempts to re-establish communication with a server in the event communication is disrupted**
 - » **The disruption may be caused by transient network failure, or by the server crashing or being brought down**
 - » **In any case, the client automatically attempts to reconnect to the server for a configurable period of time on a client-by-client basis**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Fault Handling (Cont.)**
 - ECS processes encountering an error or receiving an error from a server request can either pass the error back to a higher-level client or present it to the operator for operator intervention
 - The specific fault handling policies for DSS and OMS client processes are shown in the table that follows

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



DSS and OMS Fault Handling Policies

Client Process	Fault Handling Policy
EcDsScienceDataServer EcDsHdfEosServer	<p>Retry errors: Errors are retried a configurable number of times, then passed back to the calling client process unchanged. The default retry policy for Science Data Servers is “retry forever.” For asynchronous “acquire” requests involving subsetting, retry errors encountered with the HDF servers are not returned to the client. Instead, the request is queued for future execution.</p> <p>Fatal errors: Errors are passed back to the calling client process.</p> <p>NOTE: Errors associated with asynchronous requests are logged but do not appear on any GUI. The Operator restarts HDF servers manually.</p>
EcDsDistributionServer	<p>Errors are presented to the operator via the DDIST GUI.</p> <p>Retry errors: Errors are presented as “Suspended with Errors” and can be resumed by the operator.</p> <p>Fatal errors: Errors are presented as “Failed.” For synchronous requests, fatal errors are also passed back to the calling client process. For asynchronous requests, fatal errors are sent as part of the e-mail notification.</p>
EcDsStRequestManagerServer EcDsStDTFServer	<p>Retry errors: Errors are passed back to the calling client process.</p> <p>Fatal errors: Errors are passed back to the calling client process.</p>

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



DSS and OMS Fault Handling Policies (Cont.)

Client Process	Fault Handling Policy
EcOmOrderManager	Retry errors: Errors are retried a configurable number of times and then the request status is changed to "Operator Intervention" in the MSS database.

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Client Crash and Restart**
 - When a client of a SDSRV or DDIST server crashes, the server (i.e., EcDsScienceDataServer, EcDsHdfEosServer, or EcDsDistributionServer) continues to service the requests that were in process at the time of the client's crash
 - When a client of a STMGT server (i.e., EcDsStArchiveServer, EcDsStRequestManagerServer, EcDsStCacheManagerServer, EcDsStPullMonitorServer, EcDsStFtpServer, EcDsStDTFServer, or EcDsStStagingDiskServer) crashes, the requests that were in process are cancelled by another client process and there is no impact to the outside requester server
 - The EcOmOrderManager does not care whether or not a client crashes

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Client Crash and Restart (Cont.)**
 - **When a client restarts in the ECS system, it sends a restart notification to each server with which it interacts**
 - » **Clients notify servers that they have come up either “cold” or “warm”**
 - » **Generally, the notification temperature sent to the server matches the temperature at which the client process is restarted**
 - » **However, there are some exceptions; for example:**
 - EcDsScienceDataServer always notifies EcDsDistributionServer that it has performed a warm restart**
 - The default behavior for both EcDsHdfEosServer and EcDsStDTFServer is to send EcDsStRequestManagerServer cold restart notification**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Client Crash and Restart (Cont.)**
 - **When a client sends restart notification to the EcDsStRequestManagerServer, the server calls a stored procedure to clean up the old request and staging disk (if any) created by the client, based on whether it was a cold or warm start**
 - » **The Storage Management Servers are not directly notified when a restart has occurred**
 - » **The Storage Management Servers respond to the event according to the fact that a previous request has been marked as failed and any staging disk resources they have allocated have been released**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Client Crash and Restart (Cont.)**
 - **Default server behavior in response to “warm” startup notification from a client:**
 - » **Outstanding requests for the restarted clients remain available in the persistent store**
 - » **The outstanding requests may be resubmitted by the client, and are serviced to completion upon resubmission**
 - » **Associated resources are left allocated until the requests are completed**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Client Crash and Restart (Cont.)**
 - **Default server behavior in response to “cold” startup notification from a client:**
 - » **All outstanding requests for the restarted client are cancelled**
 - » **If the client resubmits any cancelled request using the same RPC ID (e.g., by pressing the Retry button from an operator GUI), it is failed with a fatal error due to the client cold startup notification**
 - » **Any resources associated with the cancelled requests are released and reclaimed by the system**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Client Crash and Restart (Cont.)**
 - **The following servers have some non-standard responses to startup notification:**
 - » **EcDsStArchiveServer**

Warm Notification: Default server behavior (as previously described)

Cold Notification: For partially completed Ingest operations, all files stored are removed (Partial granules are never permitted in the archive)
 - » **EcDsStStagingDiskServer**

Warm Notification: All staging disks owned by the restarted client are retained, including temporary staging disks

Cold Notification: All staging disks owned by the restarted client are released

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Server Crash and Restart**
 - When a server crashes, clients cannot continue to submit requests for processing
 - Synchronous requests in progress result in a Distributed Computing Environment (DCE) exception being thrown back to the client process, which enters a rebinding failure recovery mode (as previously mentioned)
 - Attempts to submit requests while the server is down result in the client blocking until a communication timeout has been reached
 - Although DCE has been replaced by socket-based library calls (i.e., CCS Middleware), the DCE exception code is handled by the CCS Middleware

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Server Crash and Restart (Cont.)**
 - When a server restarts, it may perform various resynchronization activities in order to recover from an unexpected termination
 - In the event of a server cold start or cold restart, the server typically cancels all outstanding requests and reclaims all associated resources
 - In general, existing request queues are retained for warm restarts and cleared for cold starts or cold restarts

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Server Crash and Restart (Cont.)**
 - **EcDsScienceDataServer- and EcDsHdfEosServer-specific activities upon start/restart:**
 - » **Warm Restart:** Restart asynchronous “acquire” requests that were in progress before the crash; retain the queue of asynchronous “acquire” requests; it is expected that synchronous requests would be resubmitted by the respective senior client applications (i.e., PRONG or INGST); send event notifications to the Subscription Server for any services completed before the crash for which a subscribed event is registered but has not been sent to the Subscription Server
 - » **Cold Start or Cold Restart:** Purge the queue of asynchronous “acquire” requests; purge the queue of Subscription Server Event Notifications

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Server Crash and Restart (Cont.)**
 - **EcDsDistributionServer-specific activities upon start/restart:**
 - » **Warm Restart:** Request Processing is restarted from the last check-pointed state
 - » **Cold Start or Cold Restart:** EcDsDistributionServer deletes all (prior) request information from its database
 - **EcDsStArchiveServer-specific activities upon start/restart:**
 - » **Warm Restart:** Retains existing request queues
 - » **Cold Start or Cold Restart:** For partially completed “store” requests, the files copied into the archive are removed; for partially completed “retrieve” requests, the access count is decremented in the read-only cache

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Server Crash and Restart (Cont.)**
 - **EcDsStCacheManagerServer-specific activities upon start/restart:**
 - » **Warm Restart:** The contents of the read-only cache are synchronized with the database; discrepancies are logged and removed
 - » **Cold Start or Cold Restart:** All files are removed from the read-only cache; links to files in the read-only cache are left dangling
 - **EcDsStStagingDiskServer-specific activities upon start/restart:**
 - » **Warm Restart:** The set of staging disks in the staging area is synchronized with the database; discrepancies are logged and removed; existing request queues are cleared
 - » **Cold Start or Cold Restart:** All staging disks are removed

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Server Crash and Restart (Cont.)**
 - **EcDsStPullMonitorServer-specific activities upon start/restart:**
 - » **Warm Restart:** The contents of the Pull Area and user request areas are synchronized with the database; discrepancies are logged and removed
 - » **Cold Start or Cold Restart:** All files in the Pull Area and all user request areas are removed
 - **EcDsStFtpServer-specific activities upon start/restart:**
 - » **Warm Restart:** Existing request queues are retained
 - » **Cold Start or Cold Restart:** Existing request queues are cleared

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Request Resubmission**
 - Upon restarting a crashed client or server, requests are typically resubmitted
 - If the restarted process was started warm, the fault-recovery capabilities permit the server to resume processing of the request from its last check-pointed state
 - » This prevents needless repetition of potentially time-consuming activities

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Request Resubmission (Cont.)**
 - **EcDsScienceDataServer- and EcDsHdfEosServer-specific activities upon upon resubmission of a request:**
 - » **All requests are serviced as if they are new requests**
 - » **RPC IDs are generated automatically and reproducibly; consequently, the Science Data Server typically recreates the same allocation requests on a resubmission; this can trigger special logic to handle requests for which an allocated staging disk has been transferred to the Data Distribution Server**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



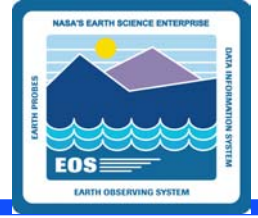
- **Fault Recovery: Request Resubmission (Cont.)**
 - **EcDsDistributionServer-specific activities upon upon resubmission of a request:**
 - » If previously submitted and completed, the request status is returned based on the check-pointed request status
 - » Otherwise, the client request thread is synchronized with the worker thread actually servicing the request
 - **EcDsStArchiveServer-specific activities upon upon resubmission of a request:**
 - » The request is restored from the last check-pointed state
 - » For “store” requests, copies into the archive are resumed from the last file copied
 - » For “retrieve” requests, the entire “retrieve” request is reprocessed; however, files previously retrieved for the request are, in all likelihood, still in the read-only cache

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Request Resubmission (Cont.)**
 - **EcDsStCacheManagerServer- and EcDsStFtpServer-specific activities upon upon resubmission of a request:**
 - » If previously submitted and completed, the request status is returned based on the check-pointed request status
 - » Otherwise, the request is processed anew
 - **EcDsStStagingDiskServer-specific activities upon upon resubmission of a request:**
 - » For staging disk allocation, the results are returned to the client if the client resubmits the allocation request under which the disk was created
 - **EcDsStPullMonitorServer- and EcDsStDTFServer-specific activities upon upon resubmission of a request:**
 - » The resubmitted request is processed as if it were a new request

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Fault Recovery: Request Resubmission (Cont.)**
 - **EcOmOrderManager-specific activities upon upon resubmission of a request:**
 - » **EcOmOrderManager uses a different RPC ID for request resubmission**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Trouble Symptoms**
 - Review the trouble symptoms
 - Check the status of relevant hosts/servers (as necessary)
 - Check log files (as necessary)
 - Take action to correct the problem(s)
 - If the problem cannot be identified and fixed without help within a reasonable period of time, the appropriate response is to call the help desk and submit a trouble ticket in accordance with site Problem Management policy

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



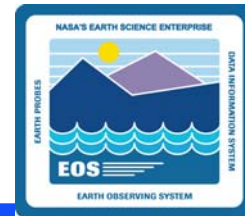
- **Troubleshooting table**
 - describes actions to be taken in response to some common Data Distribution and Order Manager GUI problems
 - if the problem cannot be identified and fixed without help within a reasonable period of time, call the help desk and submit a trouble ticket in accordance with site Problem Management policy

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



Symptom	Response
Unable to log in to any host (e.g., Operations Workstation, g0acs02).	Check with the Operations Controller/System Administrator to ensure that the host is "up."
GUI or web browser (as applicable) not displayed when the start-up script/command has been properly invoked.	Ensure that the DISPLAY variable was set properly. [For detailed instructions refer to the procedure for Launching the Data Distribution Operator and Storage Management Control GUIs (previous section of this lesson).]
Error message associated with the Data Distribution Operator GUI.	Refer to Table 6, Data Distribution Operator GUI User Messages (adapted from the corresponding table in 609-CD-610-003, <i>Release 6B Operations Tools Manual for the ECS Project</i>) and Table 7, Storage Management User Messages (adapted from DsShErrorMessages.txt and DsStErrorMessages.txt in the /usr/ecs/MODE/CUSTOM/data/DSS directory on the DSS hosts).
Error message associated with the Storage Management Control GUI.	Refer to Table 7, Storage Management User Messages (adapted from DsShErrorMessages.txt and DsStErrorMessages.txt in the /usr/ecs/MODE/CUSTOM/data/DSS directory on the DSS hosts).
Error message associated with the Order Manager GUI.	Refer to Table 8, Order Manager GUI User Messages (adapted from the corresponding table in 609-CD-610-003, <i>Release 6B Operations Tools Manual for the ECS Project</i>).

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



Symptom	Response
Request status change to "Suspended with Errors," indicating a data distribution failure.	<ol style="list-style-type: none"> 1. If a suspended request is an FtpPush request to a remote host (e.g., ftp.averstar.com), check the connection to the remote host. [For detailed instructions refer to the procedure for Checking the Connection to the Remote FTP Host (subsequent section of this lesson).] 2. Ensure (e.g., using EcCsdPingServers) that it is possible to connect to the necessary hosts and servers (listed in Table 9). [For detailed instructions refer to the procedure for Checking Connections to Hosts/Servers (subsequent section of this lesson).] 3. If it is not possible to connect to any needed host(s)/server(s), notify the Operations Controller/System Administrator to check the hosts/servers and bring them back up if necessary. 4. If hosts/servers are all "up," notify the Operations Controller/System Administrator to have the STMGT servers bounced (shut down and immediately restarted). 5. When all relevant servers are "up," resume processing of the suspended request. [For detailed instructions refer to the procedure for Suspending/Resuming Data Distribution Requests (previous section of this lesson).] 6. If processing does not resume, refer to the procedure for Recovering from a Data Distribution Failure (subsequent section of this lesson).

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



Symptom	Response
Other problems.	<p>Check the log files (e.g., EcDsDdistGui.ALOG, EcDsDistributionServer.ALOG, EcDsStRequestManagerServer.ALOG, EcDsStStagingDiskServerDIP1.ALOG) in the /usr/ecs/MODE/CUSTOM/logs directory of the applicable host for error messages.</p> <p>[For detailed instructions refer to the procedure for Checking Log Files (subsequent section of this lesson).]</p>

Hosts, Servers, Clients etc. Relevant to DDIST and OM



HOST	SERVER/CLIENT/OTHER SOFTWARE
Sun internal server (e.g., x0acs06)	Distribution Server (EcDsDistribution Server) 8mm Server (EcDsSt8MMServer) Storage Management Request Manager (EcDsStRequestManagerServer) Staging Disk Server (EcDsStStagingDiskServer) Granule Deletion Process (EcDsGranuleDelete) Science Data Server (EcDsScienceDataServer) Science Data Server Client (EcDsScienceDataServerClient) Subscription Server (EcSbSubServer)
Operations Workstation (e.g., x0acs02)	Data Distribution Operator GUI (EcDsDdistGui) Storage Management Control GUI (EcDsStmgtGui) Science Data Server GUI (EcDsSdSrvGui)
Access/Process Coordinators (APC) Server (e.g., x0acg01)	Archive Server (EcDsStArchiveServer) Cache Manager Servers (EcDsStCacheManagerServer) (including Pull Area Manager) FTP Server (EcDsStFtpServer) Staging Disk Server (EcDsStStagingDiskServer)
FSMS Server (e.g., x0drg01)	HDF EOS Server (EcDsHdfEosServer) Archive Server (EcDsStArchiveServer) Cache Manager Server (EcDsStCacheManagerServer) FTP Server (EcDsStFtpServer) Staging Disk Server (EcDsStStagingDiskServer)

Hosts, Servers, Clients, etc. Relevant to DDIST and OM (Cont.)



HOST	SERVER/CLIENT/OTHER SOFTWARE
Ingest Server (e.g., x0icg01)	Name Server (EcCsIdNameServer) Registry Server (EcCsRegistry)
Data Pool Server (e.g., x0dps01)	Order Manager GUI (EcOmGuiHomePage.pl)

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **DDIST Troubleshooting Procedures**
 - **Checking Connections to Hosts/Servers**
 - **Recovering from a Data Distribution Failure**
 - **Responding to Requests that Exceed the Distribution Request Threshold**
 - **Checking the Request Manager Server Debug Log**
 - **Checking the Science Data Server Log Files**
 - **Checking the Archive Server Log Files**
 - **Checking the Staging Disk**
 - **Checking the Staging Disk ALOG File**
 - **Checking the Space Available in the Staging Area**
 - **Checking Log Files**
 - **Checking Database Connections**

Troubleshooting DDIST and Order Manager GUI Problems (Cont.)



- **Procedure (Checking Connections to Hosts/Servers):**
 - **Access a terminal window logged in to the Distribution Server host (Sun internal server host)**
 - **Change directory to the utilities directory (/usr/ecs/MODE/CUSTOM/utilities)**
 - **At the command line prompt enter EcCsldPingServers *MODE***
 - **Observe the results displayed on the screen to determine whether connections can be made with the necessary hosts and servers**
 - **Ping the servers again (EcCsldPingServers *MODE*)**
 - **If it is not possible to connect to any needed local host(s)/server(s), notify the Operations Controller/System Administrator to check the hosts/servers and bring them back up if necessary**

Recovering from a Data Distribution Failure



- **Recovering from a data distribution failure**
 - Operator intervention may be required when there is a data distribution fault or error (e.g., failure of storage management to acquire granules from the archive)
 - Distribution Technician may use several sources for troubleshooting information
 - » Data Distribution Operator GUI Distrib'n Requests tab
 - » log files on various host machines

Recovering from a Data Distribution Failure (Cont.)



- **Procedure**
 - Review the trouble symptoms
 - Check for requests that exceed the distribution request threshold
 - Check the connection to the remote host (if applicable)
 - Check for an acquire failure
 - Check appropriate log files as necessary
 - Take action to correct the problem(s)
 - Verify that distribution request processing has resumed

Responding to Requests that Exceed the Dist. Request Threshold



- When a distribution request exceeds the corresponding distribution request threshold (e.g., `FtpPushThreshold` or `FtpPullThreshold`), the request is suspended in DDIST with the following error mnemonic:
 - `DsEDdXLargeRequest`

Responding to Requests that Exceed the Dist. Request Threshold



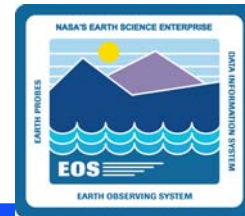
- **Procedure**
 - Record (e.g., write down) the Request ID (as displayed on the Distrib'n Requests tab of the Data Distribution Operator GUI) for the request that exceeds the distribution request threshold
 - Cancel the request
 - Contact User Services to determine whether or not the user's request should be processed
 - If the request should be completed, determine whether User Services or Distribution will partition and resubmit the request
 - If the request should be completed and Distribution should partition the request, partition and resubmit the request

Checking the Connection to the Remote FTP Host



- A distribution request for FtpPush of data to a remote host (e.g., <ftp.averstar.com>) shows a status of “Suspended with Errors”
 - It is suspected that it may not be possible to connect to the remote ftp host

Checking the Connection to the Remote FTP Host (Cont.)



- **Procedure**
 - Access a terminal window logged in to the appropriate host
 - Use the appropriate script to ping the remote ftp host
 - Make an anonymous ftp connection to the remote ftp host
 - Notify the remote system's point of contact of any problem (if applicable)
 - Wait until the communication problem has been resolved (if applicable)
 - Return to Step 1 (if applicable)
 - Resume the affected distribution request(s) (after successful ftp test)

Handling an Acquire Failure



- **Procedure**
 - **Check the Request Manager Server Debug Log**
 - **Check the Science Data Server ALOG File**
 - **Check the Archive Server ALOG File**
 - **Check the Staging Disk**
 - **Check the Staging Disk ALOG File**
 - **Check the Space Available in the Staging Area**

Checking Log Files



- **Log files can provide indications of the following types of problems:**
 - **DDIST- or STMGT-related problems**
 - **Communication problems**
 - **Database problems**
 - **Lack of disk space**

Checking Log Files (Cont.)



- **Procedure**
 - Access a terminal window logged in to the appropriate host
 - Change directory to the directory containing the data distribution log files
 - » `/usr/ecs/MODE/CUSTOM/logs`
 - Review log file to identify problems
 - Respond to problems

Checking Database Connections



- **Storage management/data distribution shared database**
 - Repository of data concerning data distribution requests
 - If applications are unable to connect to the database, the data distribution request data cannot be retrieved or displayed on the GUI
 - Checking the database connections is a logical step in trying to isolate the following types of problems:
 - » GUI does not display data
 - » Display does not refresh

Checking Database Connections



- **Procedure**

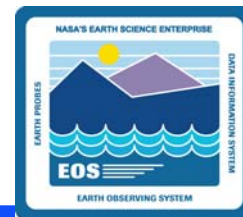
- **Submit a request to the Database Administrator to identify the values for the following parameters associated with the EcDsDistributionServer:**
 - » **DBName**
 - » **DBServer**
 - » **DBMaxConnections**
- **Use the interactive structured query language (isql) sp_who command to obtain a list of connections**
- **Use the isql sp_configure command to obtain a list of the number of connections for which the database has been configured**
- **Compare the number of actual connections (results of sp_who) with the number of connections for which the database has been configured (results of sp_configure "user connections")**
- **Notify the Database Administrator of problems**

PDS Operations



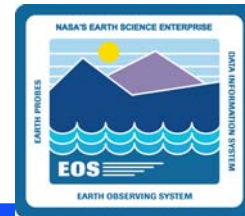
- **Operator Tools**
 - **PDS Operator Interface (PDSOI)**
 - **PDSIS Operator Interface (PDSIS OI)**
 - **PDS Job Monitor**
 - **Rimage CD Production Software**
 - » **Data Publisher**
 - » **Production Server**
 - **PDS Verification Tool**
 - **PDS Maintenance Module**
 - **PDSIS Maintenance Module**
 - **PDS Cleanup Manager**
 - **PDSIS Cleanup Manager**

PDS Operations (Cont.)



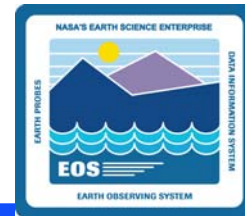
- **PDS Operator Interface (PDSOI)**
 - Started up using either a shell script (`pdsoi_prod.sh`) or using an alias (`pdsoi`)
 - Script makes a connection to the Oracle database
 - » Connection is made using the Oracle SQL*Net communication mechanism
 - Script ensures that all operators log on to Oracle with the same usercode and password
 - Usercode has privileges against only those tables used specifically by PDS
 - » Any data needed to produce the product is included in the accessible tables
 - Generates several reports dealing with order status and jewel-case inserts

PDS Operations (Cont.)



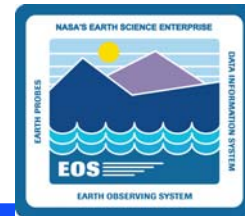
- **PDS Operator Interface (PDSOI) (Cont.)**
 - **Communications between the OI module and the product generation code are handled via ASCII files**
 - » **OI module generates appropriate ASCII parameter files**
 - **PDSOI module looks for returning ASCII files from the product generation code on a timed basis and processes them appropriately**
 - **Source data needed to produce a customer's request can come from several sources**
 - » **Might come from offline media that is mounted by an operator, from a mass storage device, or from some value-added processing system**
 - » **In the ECS implementation of PDS the data are retrieved from local disks where PDSIS will have had ECS stage the data**

PDS Operations (Cont.)



- **PDS Operator Interface (PDSOI) (Cont.)**
 - **PDS back end consists of a set of production modules**
 - » **Production module (PM) is a piece of software that generates products for one particular product line**
 - » **For example, if the PDS operator activates an order with a product code of G001, the OI invokes the corresponding production module (e.g., “genericout”), which in turn generates the media to ship to the customer**
 - » **PMs and OI communicate through status files that allow the back end to indicate either a success or failure to the front end**
 - » **For the ECS implementation, only one generic production module (i.e., “genericout”) was used initially**
 - » **Some additional production modules have been developed**

PDS Operations (Cont.)



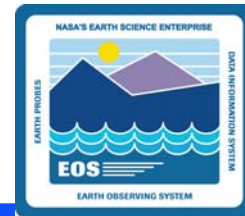
- **PDS Operator Interface (PDSOI) (Cont.)**
 - **Product generation code within PDS generates customer products on magnetic tape or recordable optical media (could just as well prepare them for FTP delivery)**
 - **Product generation software is started (via a top-level PDS process called "PDSTOP") by a system call from the PDSOI when a job is activated**
 - » **A production parameter file (PPF) is created in the \$PDSROOT directory for the current PDS user ID**
 - » **File name is <order number>_<first unit number>.ppf (for example: 0110101310123_00001.ppf)**

PDS Operations (Cont.)



- **PDS Operator Interface (PDSOI) (Cont.)**
 - Each product generation module generates an order status file for passing back to the OI
 - File is named <OI ID> <PPF KEY>.status (e.g., PDS1_test_0110101310123_00001.status) and is placed within the \$PDSROOT/status directory after product completion
 - The OI ID in the status file name is composed of...
 - » PDS Machine name
 - » underscore
 - » Console ID
 - PPF Key is made up of...
 - » order number
 - » underscore
 - » zero-padded unit number

PDS Operations (Cont.)



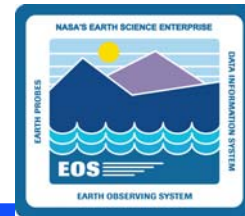
- **PDS Operator Interface (PDSOI) (Cont.)**
 - There is one record per line in the status file for each unit that was produced in the specified job run
 - » Each line has the format
|<ORDNUM>|<unit>|<status>|<media_id>|<ncopies>|1
| where ORDNUM is the order number from the PDT_PDSINFO table, unit is the unit processed, status is the resulting status of the unit, media_id is the unique media identification number, and ncopies is the number of copies produced for the media_id
 - » Lines in the status file are sorted by media_id
 - Relevant instance of PDSOI picks up the status files that pertain to the OI ID of that instance and determines the status of the units
 - » 'F' for units that are successfully produced
 - » 'G' for units that had errors

PDS Operations (Cont.)



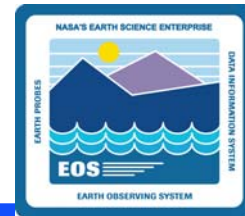
- **PDS Operator Interface (PDSOI) (Cont.)**
 - If the output product is CD or DVD, the PDS generation software creates a label on the CD or DVD itself
 - For an 8mm or DLT product the PDS generation software creates a label file that is sent to a label printer

PDS Operations (Cont.)



- **PDSIS Operator Interface (PDSIS OI)**
 - Used in communicating with the PDSIS database
 - One of the principal uses of the PDSIS OI is marking a job shipped
 - » When the media have been produced, verified, and assembled with the packing lists and shipping labels
 - Another use is investigating the status of orders outside of PDSSA
 - Started up using either a shell script (`pdsisoi_mode.sh`) or an alias (`pdsisoi`)
 - Script makes a connection to the Oracle database
 - » Ensures that all operators log on to Oracle with the same usercode and password
 - » Usercode has privileges against only those tables used specifically in PDS operations

PDS Operations (Cont.)



- **PDS Job Monitor**

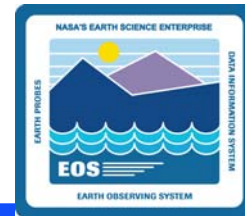
- Intended to be used as a complement to the PDSOI
- Lists the PDS jobs that are currently being processed by the production modules and indicates the specific stage of processing that each running job has reached
 - » On request it displays the job log or the production parameter file (.ppf) file for any running job
- Displays information about available disk space and workload on the Rimage CD generation systems
- Can be used in verifying consistency between the jobs that the PDS Operator Interface reports as being active and the jobs that actually are active
 - » For instance, if the PDS machine crashes and is brought back up, after the Operator Interface window is started, all jobs that were active at the crash will be shown in an active state (although none are actually running)

PDS Operations (Cont.)



- **Rimage CD Production Software**
 - Data Publisher
 - Production Server

PDS Operations (Cont.)



- **Rimage CD Production Software (Cont.)**
 - **Data Publisher**
 - » **Runs on the Rimage PC**
 - » **Watches the PDS job control directory (i.e., /pdssa/rimage_jobcontrol) on the PDSSA RAID looking for files to be transferred to the Rimage PC**
 - » **PDS job control directory is mapped to a network drive on the Rimage PC**
 - » **Files are identified by a “.ORD” extension to the filename**
 - » **“.ORD” extension indicates that the data are ready to be transferred**
 - » **Transfers the data via ftp to a hard disk drive on the Rimage PC, updates the Rimage PowerTools log file (also located in the job control directory), and changes the “.ORD” extension to a “.dn0” extension**

PDS Operations (Cont.)



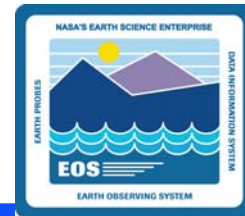
- **Rimage CD Production Software (Cont.)**
 - **Data Publisher (Cont.)**
 - » Updates the PowerTools log file when the production is complete, which in turn places the order in QC-HOLD on PDSOI
 - » Then PDS prints summaries and jewel-case inserts
 - **Production Server**
 - » Runs on the Rimage PC
 - » Does an initial hardware check on the Rimage CD/DVD burners, internal printer and the media carousel
 - » Produces the media (writing the data to disk) after Data Publisher has transferred the data (via ftp) onto one of the Rimage PC hard disk drives (e.g., the E: drive)

PDS Operations (Cont.)



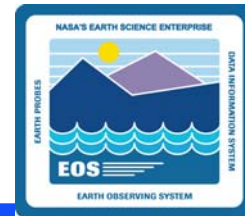
- **PDS Verification Tool**
 - **Provides a means of selecting a verification drive for checking a disk or tape when performing a QC check**
 - **Reads the directories on the disk or tape and creates a listing that is printed**
 - » **Verification report indicates whether the data have been recorded on the disk or tape**

PDS Operations (Cont.)



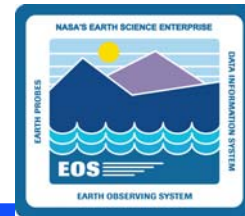
- **PDS Maintenance Module**
 - **Contains Oracle Forms, which are used to look at and update the data within the database used by the PDSOI**
 - » **Access to the forms is normally restricted to lead operators**
 - **UNIX script is used for starting up the PDS Maintenance Module**
 - » **Script is in the \$PDSROOT/run directory (e.g., /data1/pds_it/run)**
 - » **Script is named pdsmaint_mode.sh (e.g., pdsmaint_it.sh) and has an alias set to "pds_maint"**
 - » **Operator just has to type "pds_maint" to bring up the PDS Maintenance login window**

PDS Operations (Cont.)



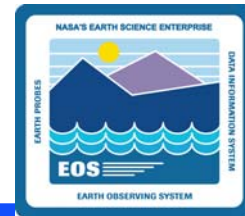
- **PDS Maintenance Module (Cont.)**
 - Support maintenance for the PDS Maintenance Module requires an Oracle usercode and password that are different from those used to run the PDSOI module
 - » Additional level of security is intended to prevent unauthorized personnel from modifying the maintenance tables or performing functions that require advanced training and knowledge
 - Like the PDSOI the maintenance module resides on the PDS machine

PDS Operations (Cont.)



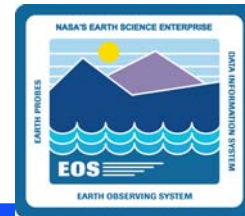
- **PDSIS Maintenance Module**
 - **Contains Oracle Forms, which are used to look at and update the data within the database tables used by the PDSIS OI**
 - » **Access to the forms is normally restricted to lead operators**
 - **UNIX script is used for starting up the PDSIS Maintenance Module**
 - » **Script is in the \$PDSROOT/run directory (e.g., /usr/local/pds_it/run or /data1/pds_it/run)**
 - » **Script is named pdsismaint_mode.sh (e.g., pdsismaint_it.sh) and has an alias set to "pdsismaint"**
 - » **Operator just has to type "pdsismaint" to bring up the PDSIS Maintenance login window**

PDS Operations (Cont.)



- **PDSIS Maintenance Module (Cont.)**
 - Support maintenance for the PDSIS Maintenance Module requires an Oracle usercode and password that are different from those used to run the PDSIS OI module
 - » Additional level of security is intended to prevent unauthorized personnel from modifying the maintenance tables or performing functions that require advanced training and knowledge
 - Like the PDS Maintenance Module the PDSIS Maintenance Module resides on the PDS machine

PDS Operations (Cont.)



- **PDS and PDSIS Cleanup Managers**
 - The large number of files generated by PDSIS and PDSSA activities would overwhelm the system if some of the files were not removed from the working directories on a fairly frequent basis
 - » However, some files may be needed for some period of time to permit troubleshooting and recovery of jobs in case of problems
 - PDS Cleanup Manager and PDSIS Cleanup Manager are GUIs that are used for specifying file cleanup strategies for PDSSA files or PDSIS files:
 - PDSSA
 - » Summary files
 - » Log files
 - » Status files
 - » Label files
 - PDSIS
 - » Product request files
 - » Product result files
 - » Socket log files

PDS Operations (Cont.)



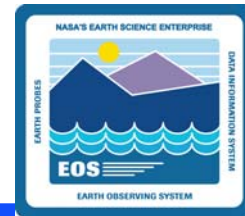
- **PDS and PDSIS Cleanup Managers (Cont.)**
 - **Generate or modify Bourne shell scripts (i.e., cleanup.sh and pdsiscleanup.sh) that implement the file cleanup strategies**
 - **May modify the crontab file to adjust the time intervals for deletion or archiving of files**
 - **Are not used very often, especially after a manageable retention period has been determined for PDS files and has been implemented through the cleanup scripts and crontab file**

Starting Up PDS



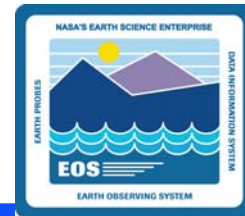
- **PDS Start-Up Activities**
 - **Starting up PDS involves starting the following processes:**
 - » **Starting the PDSIS Server and PDSIS Cron**
 - » **Starting the PDS Cron**
 - » **PDS Operator Interface (PDSOI)**
 - » **PDSIS Operator Interface (PDSIS OI)**
 - » **PDS Job Monitor**
 - » **Rimage CD Production Software (Data Publisher and Production Server)**
 - » **PDS Verification Tool**
 - » **PDS Maintenance Module (as needed)**
 - » **PDSIS Maintenance Module (as needed)**

Starting Up PDS (Cont.)



- It is generally good practice to use multiple workspaces in PDS operations (due to the large number of GUIs)
 - PDSIS workspace:
 - » PDSIS OI
 - » PDSIS Maintenance Module (when necessary)
 - PDSSA workspace:
 - » PDSOI
 - » PDS Job Monitor
 - » PDS Verification Tool
 - » PDS Maintenance Module (when necessary)
 - DDIST workspace:
 - » Data Distribution Operator GUI

Starting Up PDS (Cont.)

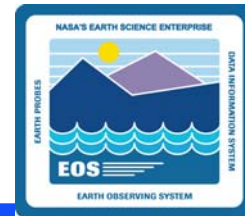


- **Starting the PDSIS Server and PDSIS Cron: Procedure**

NOTE: A PDSIS user ID (e.g., pdsis, pdsis_ts1, pdsis_ts2) is used in this procedure

- Access a terminal window logged in to the PDS Server host using the appropriate PDSIS user ID for the operating mode
- Type `ps -ef | grep userID` then press Return/Enter
- Type `cd path`
- Type the command to start the PDSIS Server (if applicable)
- Type the command to start the PDSIS Cron jobs (if applicable)
- Verify that the crons were started (if applicable)

Starting Up PDS (Cont.)

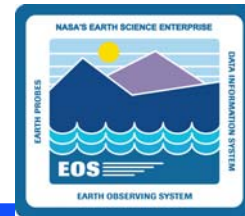


- **Starting the PDS Cron: Procedure**

NOTE: A PDS user ID (e.g., pds, pds_st, pds_it) is used in this procedure

- **Access a terminal window logged in to the PDS Server host using the appropriate PDS user ID for the operating mode**
- **Type `cd path`**
- **Type the command to start the PDS Cron jobs**
- **Verify that the crons were started**

Starting Up PDS (Cont.)

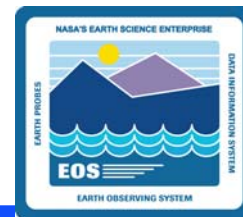


- **Starting the PDS Operator Interface (PDSOI): Procedure**
 - Access a terminal window logged in to the PDS Server host
 - Type `pdsoi`
 - Select the PDS machine
 - Type the appropriate console ID
 - Specify job selection criteria
 - Click on the Execute button
 - Set timer intervals [separate procedure]

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PDSOI: Querying Database Notice



PDS PDS1 _test

Display Reports Printers Shutdown Help

PDSMTOIX 2.3 Production 2001/01/12

Job Key	To_Do	Units	Pri	Product	Media	Project Id	Due Date	Copy Flag	Product Code	Note	Job Status
0110011280041_0004	1	6	CD	NLAPS			2000/12/11		NLP		QC Hold
01100112180003_0018	1	6	CD	NLAPS			2001/01/01	*	NLP		Active
011010111											Pending
011010111											Pending
011010111											Active Partial
011010111											Pending
011010111											Pending
050010111											Active Partial
075001211											QC Hold
075010111											QC Hold
075010111											QC Hold
080010111											QC Hold

Selection Criteria

Priority	Product Media	Due Date	Product Code
<input type="checkbox"/> All			
<input type="checkbox"/> 1			
<input type="checkbox"/> 2			
<input type="checkbox"/> 3			
<input type="checkbox"/> 4			
<input type="checkbox"/> 5			
<input type="checkbox"/> 6			
<input type="checkbox"/> 8			
<input type="checkbox"/> 9			

FTPDS DOQQ

Sort By

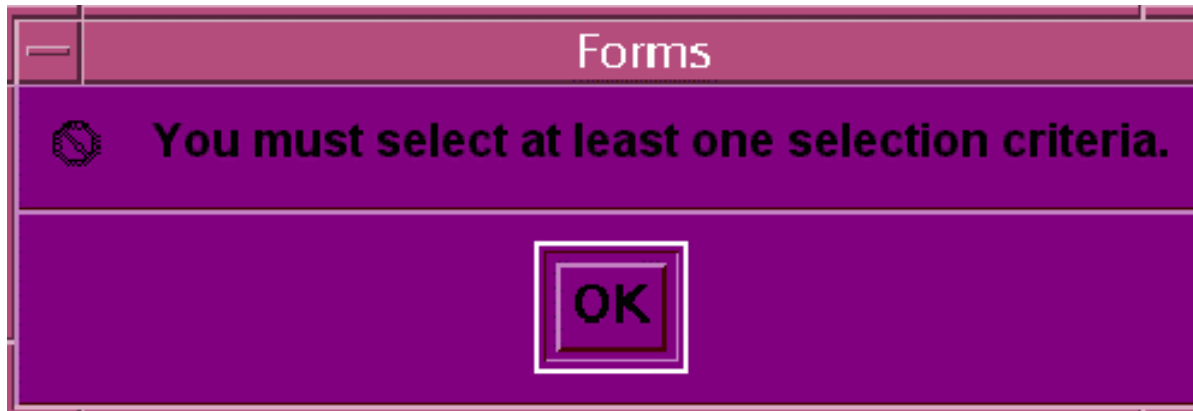
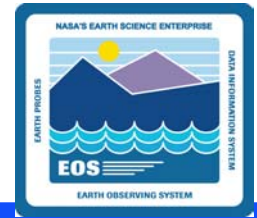
1	Job Key	Product Media	Product Code
	Priority	Project Id	Due Date
2	Job Status		

Cancel Execute

Working... Record: 9/9 Insert

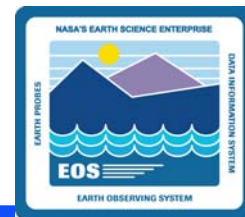
**** Notice ****
Querying Database, Please wait...

Selection Error Dialogue Box



625-CD-609-003

Starting Up PDS (Cont.)



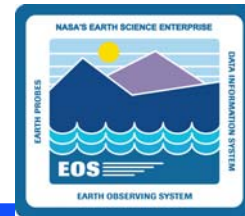
- **Starting the PDSIS Operator Interface (PDSIS OI): Procedure**
 - At the UNIX command line prompt type `cd` then press Return/Enter
 - » The alias `cd` changes the current directory to the PDS root directory for the PDS user ID of the log-in
 - Type `pdsisoi`

PDSIS Operator Interface (PDSIS OI) Main Screen



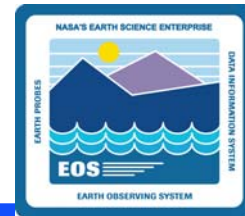
PDSIS Orders						
Display		Report		Action		
PDSISMT0IX		1.0		PDSIS		22-MAR-2001
	Order Nbr	Ecs OrdId	Ecs ReqId	Sta	Status Date	Date Entered
<input type="checkbox"/>	0000103210005	00000966	00	C	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210006	00000968	00	C	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210007	00000969	00	C	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210008	00000971	00	C	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210009	00000972	00	I	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210010	00000973	00	C	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210011	00000974	00	I	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210012	00000975	00	C	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210013	00000976	00	C	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210014	00000977	00	I	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210015	00000979	00	I	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210016	00000980	00	C	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210017	00000981	00	C	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210018	00000982	00	I	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210019	00000983	00	C	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210020	00000984	00	I	21-MAR-2001	21-MAR-2001
<input type="checkbox"/>	0000103210021	00000985	00000936	I	21-MAR-2001	21-MAR-2001
Record: 1/?						
Insert						

Starting Up PDS (Cont.)



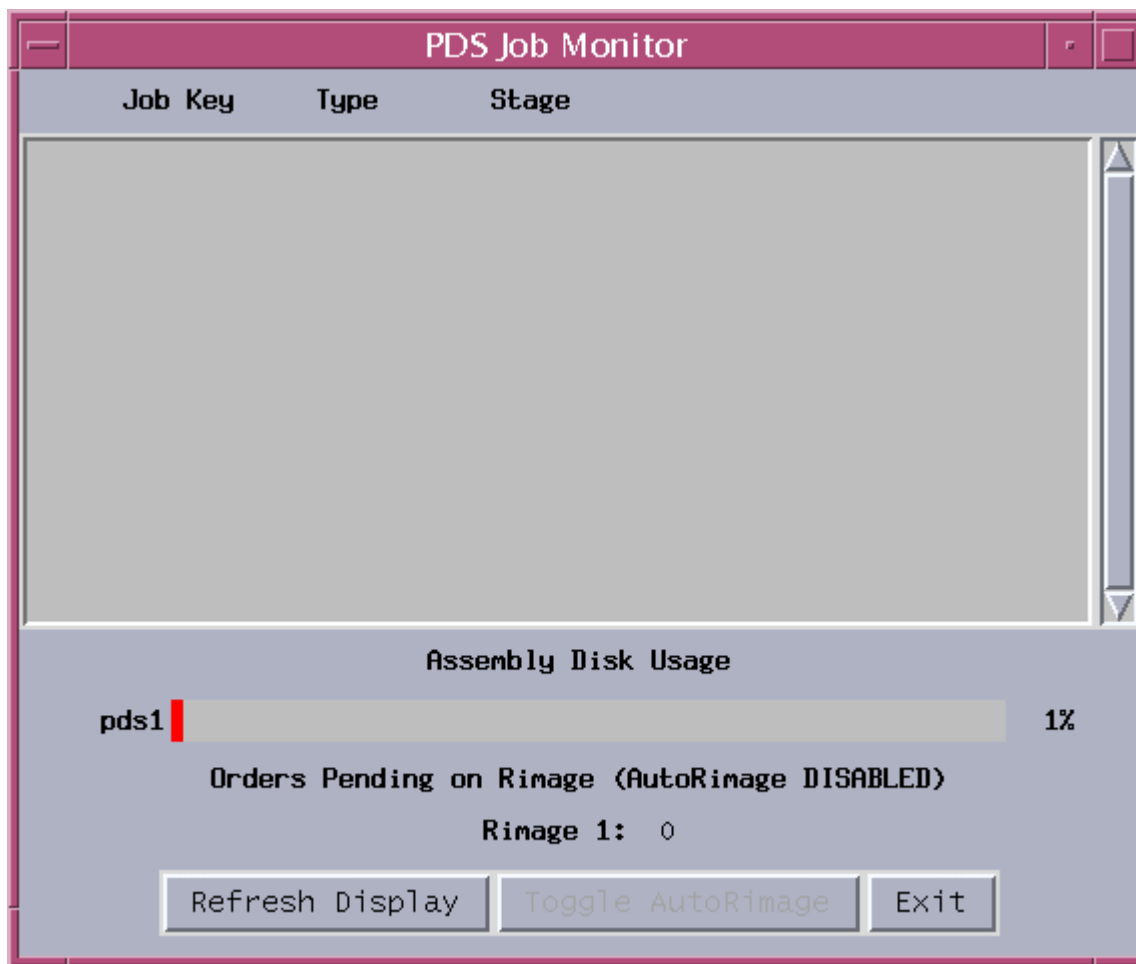
- **Starting the PDS Job Monitor**
 - The PDS Job Monitor Main Window is intended to run continually in conjunction with the PDS Main OI Screen
 - Hypothetically, there is no limit to the number of PDS Job Monitors that can be running at once
 - » However, since the application consumes a small amount of resources, care should be taken to not run multiple instances excessively

Starting Up PDS (Cont.)



- **Starting the PDS Job Monitor: Procedure**
 - At the UNIX command line prompt type `cd` then press Return/Enter
 - » The alias `cd` changes the current directory to the PDS root directory for the PDS user ID of the log-in
 - Type `cd jobmon`
 - Type `jobmonitor &`

Job Monitor Main Window

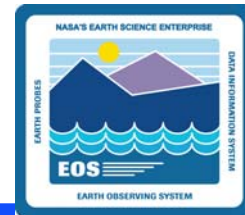


Starting Up PDS (Cont.)



- **Starting the Rimage CD Production Software**
 - The following Rimage CD production software programs have to be started on the Rimage personal computer (PC):
 - » **Data Publisher**
 - » **Production Server**

Starting Up PDS (Cont.)



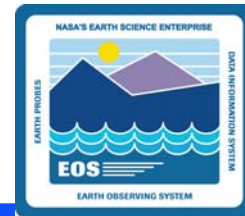
- **Starting the Rimage CD Production Software (Cont.)**
 - **A Network File System (NFS) mount is needed in order to see the job control directory (e.g., /pdssa/rimage_jobcontrol) on the PDS system**
 - » **When the Windows NT system for the Rimage PC is set up, the PDS job control directory on the PDS Server host (e.g., x0dig06) is typically mapped to the PC's Z: drive**
 - » **Data Publisher watches the job control directory looking for order files that describe data to be transferred (so they can be written to disk)**
 - » **The order files are identified by a “.ORD” extension, which indicates that data are ready to be transferred**
 - » **Data Publisher transfers the data (i.e., image files) via ftp from PDSSA to the “CD-R_Images” folder (directory) on one of the Rimage PC hard disk drives (e.g., the E: drive) and changes the “.ORD” extension on the order file to a “.dn0” extension**

Starting Up PDS (Cont.)



- **Starting the Rimage CD Production Software: Procedure**
 - Double-click on the Data Publisher icon on the PC desktop
 - Double-click on the Production Server icon on the PC desktop
 - » The Production Server does an initial hardware check on the Rimage CD/DVD burners, internal printer and the media carousel
 - Click on the Start button in the Production Server window

Starting Up PDS (Cont.)



- **Starting the PDS Verification Tool: Procedure**
 - At the UNIX command line prompt type `cd` then press Return/Enter
 - » The alias `cd` changes the current directory to the PDS root directory for the PDS user ID of the log-in
 - Type `ckwin &`

Verification Tool

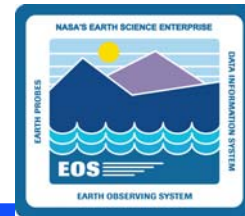


ckwin

verification
window

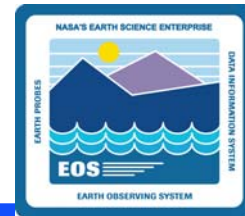
cds	8mm
1	1
2	2
3	3
4	4
5	5
6	6
7	print
8	exit

Starting Up PDS (Cont.)



- **Starting the PDS Maintenance Module: Procedure**
 - **At the UNIX command line prompt type `cd` then press Return/Enter**
 - » **The alias `cd` changes the current directory to the PDS root directory for the PDS user ID of the log-in**
 - **Type `pds_maint`**
 - **Enter `userID` in the Username field of the PDS Maintenance Module Login Screen**
 - **Enter Password in the Password field of the PDS Maintenance Module Login Screen**
 - » **It is not necessary to fill in the Database field on the PDS Maintenance Module Login Screen; it defaults to the correct database if left blank**
 - **Click on the Connect button**

PDS Maintenance Module: Login Screen



Logon

Username:

Password:

Database:

PDS Maintenance Module: Main Menu



PDS

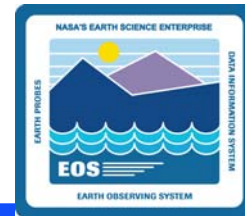
PDSMNMSM 2001/03/05

PDS Main Menu

Maintenance Modules	Miscellaneous Modules
Lookups	Machine Parameter/Job Limits
Product Code Descriptions	PDSINFO Jobs Table
Product Media Descriptions	PDSINFO Work Table
Status Code Descriptions	Query Only PDSINFO
Printers	Mass Update Pdsinfo
PPF Definitions	ReStage Job
Jewel Cases	
Exit	

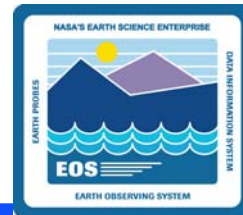
Record: 1/1 Insert

Starting Up PDS (Cont.)



- **Starting the PDSIS Maintenance Module: Procedure**
 - **At the UNIX command line prompt type `cd` then press Return/Enter**
 - » **The alias `cd` changes the current directory to the PDS root directory for the PDS user ID of the log-in**
 - **Type `pdsismaint`**
 - **Enter `userID` in the Username field of the PDSIS Maintenance Module Login Screen**
 - **Enter Password in the Password field of the PDSIS Maintenance Module Login Screen**
 - » **It is not necessary to fill in the Database field on the PDSIS Maintenance Module Login Screen; it defaults to the correct database if left blank**
 - **Click on the Connect button**

PDSIS Maintenance Module: Main Menu



PDSIS Maintenance Menu

PDSISMTMNU 1.0 PDSIS 03-APR-2001

PDSIS Orders	ODL Lookup
PDSIS Units	Outspec Info
PDSIS Address	Prod Code Info
Server Config	Lookups
Exit	

Record: 1/1 Insert

Shutting Down PDS



- **PDS Shutdown Activities**
 - **Shutting down PDS involves shutting down the following processes:**
 - » **PDS Maintenance Module**
 - » **PDS Job Monitor**
 - » **PDS Operator Interface (PDSOI)**
 - » **Rimage CD Production Software (Data Publisher and Production Server)**
 - » **PDS Verification Tool**
 - » **PDSIS Maintenance Module**
 - » **PDSIS Operator Interface (PDSIS OI)**
 - » **PDSIS Server (if necessary)**

Shutting Down PDS (Cont.)



- **Shutting Down the PDS Maintenance Module: Procedure**
 - If one of the maintenance modules is being displayed, click on the Exit button at the bottom of the window
 - If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, click on the Yes button
 - Click on the Exit button at the bottom of the PDS Maintenance Module Main Menu window

Shutting Down PDS (Cont.)



- **Shutting Down the PDS Job Monitor:
Procedure**
 - Click on the **Exit** button at the bottom of the Job Monitor Main Window

Shutting Down PDS (Cont.)



- **Shutting Down the PDS Operator Interface (PDSOI): Procedure**
 - **Select Shutdown → Stop All Jobs from the pull-down menu**
 - **Click on the Yes button on the Shutdown Confirmation dialogue box**

PDSOI: Shutdown Confirmation

A screenshot of a software window titled "Forms". Inside the window is a yellow dialog box with a question mark icon and the text "Are you sure you want to shutdown the system?". Below the text are two buttons: "Yes" on the left and "Cancel" on the right. The "Cancel" button has a double border.

Shutting Down PDS (Cont.)



- **Shutting Down the Rimage CD production software: Procedure**
 - Click on the X in the box at the upper right-hand corner of the Rimage Production Server window
 - Click on the X in the box at the upper right-hand corner of the Rimage Data Publisher window

Shutting Down PDS (Cont.)



- **Shutting Down the PDS Verification Tool:
Procedure**
 - Click on the **Exit** button at the bottom of the PDS Verification Tool
 - Click on the verification tab that appears below the Exit button

Shutting Down PDS (Cont.)



- **Shutting Down the PDSIS Maintenance Module: Procedure**
 - If one of the maintenance modules is being displayed, click on the Exit button at the bottom of the window
 - If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, click on the Yes button
 - Click on the Exit button at the bottom of the PDSIS Maintenance Module Main Menu window

Shutting Down PDS (Cont.)



- **Shutting Down the PDSIS Operator Interface (PDSIS OI): Procedure**
 - **Select Action → Shutdown from the pull-down menu**

Shutting Down PDS (Cont.)



- **Shutting down the PDSIS Server: Procedure**

NOTE: A PDSIS user ID (e.g., pdsis, pdsis_ts1, pdsis_ts2) is used in this procedure

- **Access a terminal window logged in to the PDS Server host using the appropriate PDSIS user ID for the operating mode**
- **Type `ps -ef | grep java | grep userID` then press Return/Enter**
- **Type `kill -15 processID` then press the Return/Enter key**
- **Verify that the PDSIS Server is no longer running (type `ps -ef | grep java | grep userID` then press Return/Enter)**

Monitoring/Controlling Product Processing Using PDS



- **PDSSA Monitoring Activities**
 - **Monitoring/controlling product processing using PDS (PDSSA) involves the following activities (among others):**
 - » **Determining the status of a job and/or taking action with respect to a job (using the Main OI Screen)**
 - » **Determining the status of units associated with a particular job or taking action with respect to units associated with a particular job (using the OI Detail Screen)**
 - » **Activating a Job**
 - » **Stopping/Terminating a Job**
 - » **Responding to a Status of QC-Hold (Performing a QC Check or Verification)**
 - » **Completing a Job**

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **PDSSA Monitoring Activities (Cont.)**
 - **Monitoring/controlling product processing using PDS involves the following activities (among others) (Cont.):**
 - » **Entering Notes about a Job**
 - » **Promoting a Job**
 - » **Generating PDS Production Reports**

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **PDSSA Monitoring Activities (Cont.): Main OI Screen**
 - **Action Button [not labeled]**
 - » **Allows access to a list of actions that can be taken with respect to the job**
 - **Job Stopped [not labeled]**
 - » **"STOP" is displayed in the field if the job has been stopped**
 - **Job Key**
 - » **Unique label for the job composed of the order number, an underscore and a zero-padded unit number of the first unit of the job**
 - **To_Do Units**
 - » **Number of units left in the job in either a pending, active or QC_hold state**

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **PDSSA Monitoring Activities (Cont.):
Main OI Screen (Cont.)**
 - **Pri**
 - » Priority of the job from 1 to 9, with "1" the highest priority
 - **Product Media**
 - » The pds_description of the output specifications
 - **Project Id**
 - » An optional field that indicates whether there is a particular project associated with the job
 - **Due Date**
 - » Date that the order is due to the customer

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **PDSSA Monitoring Activities (Cont.):
Main OI Screen (Cont.)**
 - **Copy Flag**
 - » An “*” is displayed if the total number of copies does not equal the total number of units (Used if multiple copies are needed for a specific unit)
 - **Product Code**
 - » The pds_description of the product code
 - **Note**
 - » An “*” is displayed if there is a current note for the job
 - **Job Status**
 - » Status of the job

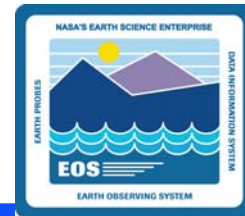
303

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **PDSSA Monitoring Activities (Cont.):**
OI Detail Screen (for the selected individual PDS job)
 - **Job Key**
 - » The dynamically generated identifier tying the units in the job together
 - **Copies**
 - » Number of copies the customer wants for each unit
 - **Pri**
 - » Priority code for the job
 - **Product Media**
 - » PDS's description of the output specifications
 - **Due Date**
 - » Date that the job needs to be delivered to the customer

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **PDSSA Monitoring Activities (Cont.):**
OI Detail Screen (for the selected individual PDS job) (Cont.)
 - **Product Code**
 - » PDS's description of the product code
- **Monitoring/Controlling Product Processing Using PDS (Cont.): OI Detail Screen (for each unit within the selected PDS job)**
 - **"Select" button [not labeled].**
 - » Used for selecting or deselecting each individual unit to which an action (e.g., "Activate") will be applied.
 - **Unit #**
 - » Unit number

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **PDSSA Monitoring Activities (Cont.):**
OI Detail Screen (for each unit within the selected PDS job)
 - **Status**
 - » PDS's description of the status
 - **PPF Key**
 - » Blank if the unit is in pending status; otherwise the PPF Key for the unit is displayed
 - » Ties to the .ppf file used during the product generation process
 - » Composed of the order number, an underscore and the zero-padded unit number
 - **ECS Order ID**
 - » ECS Order Id (blank if there is no ECS Order ID in the PDT_PDSINFO table)

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **PDSSA Monitoring Activities (Cont.):**
OI Detail Screen (for each unit within the selected PDS job)
 - **Source Data Path**
 - » Location of the source data needed to produce the customer's product
 - » Could be either a media storage identifier in the digital archive or a storage location on a mass media device or a location on a remote machine

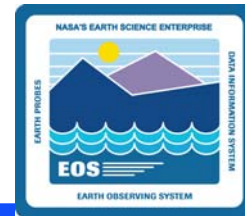
308

Monitoring/Controlling Product Processing Using PDS (Cont.)



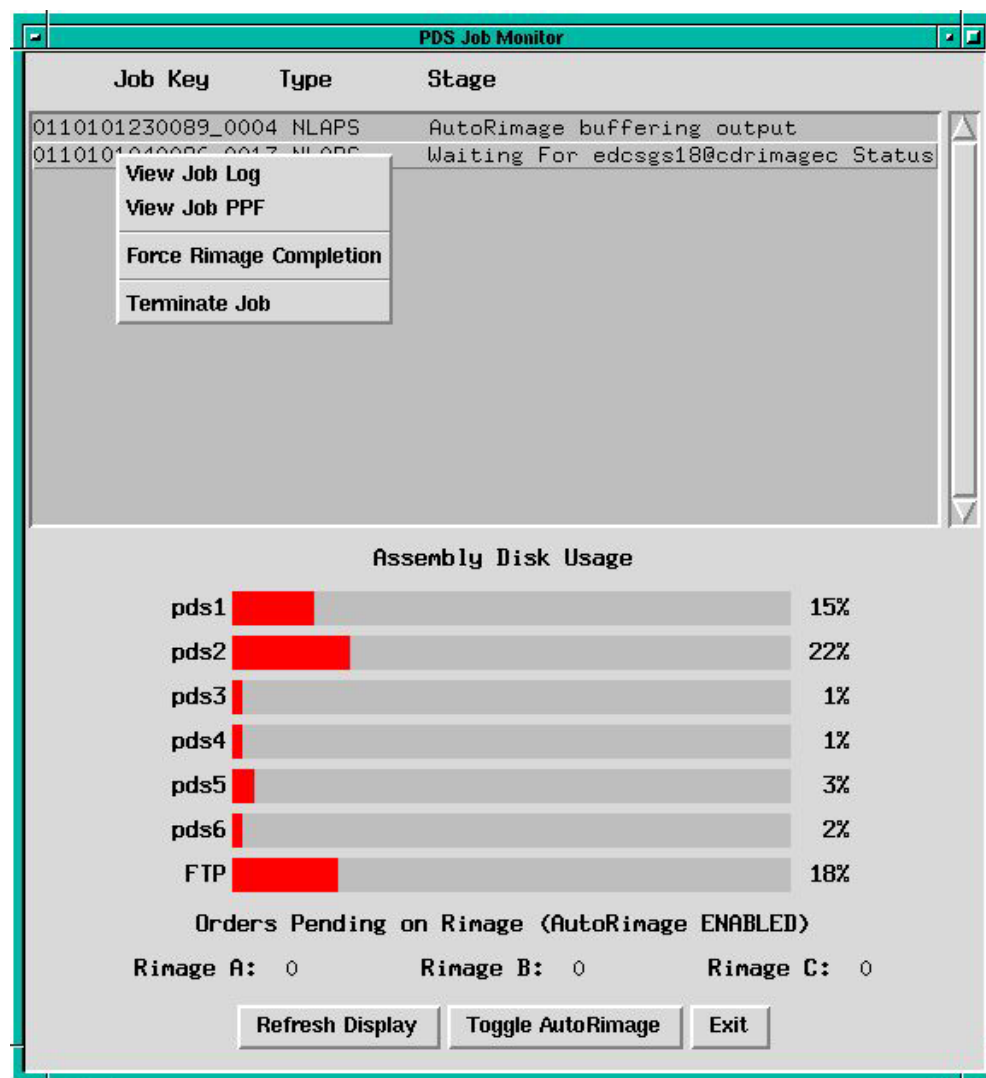
- **PDSSA Monitoring Activities (Cont.):
Job Monitor Main Window**
 - **Running Jobs**
 - » Job Key
 - » Type [of product]
 - » Stage [what the job is currently doing (if the information is available)]
 - **Assembly Disk Usage**
 - » Graphical displays of the free space remaining on the PDS assembly and ftp staging disks
 - » Intended to give the operator advance warning when one (or more) of the disks is running low on available space

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **PDSSA Monitoring Activities (Cont.): Job Monitor Main Window (Cont.)**
 - **Rimage Pending Orders**
 - » Displays how many orders are pending on the Rimage systems (how many CD images are waiting to be pulled over to the Rimage system; not the number of jobs that are actually active on the Rimage itself)
 - » Displays whether PDS's AutoRimage mode is enabled or disabled
- **Monitoring/Controlling Product Processing Using PDS (Cont.): Verification Tool**
 - Drives available for or in use performing verification of disks and tapes

Job Monitor Main Window



Verification Tool



ckwin

verification
window

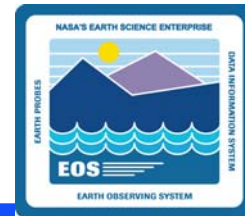
cds	8mm
1	1
2	2
3	3
4	4
5	5
6	6
7	print
8	exit

Monitoring/Controlling Product Processing Using PDS (Cont.)



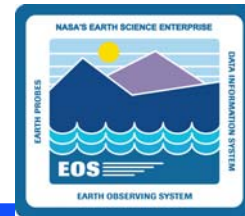
- **Monitoring/Controlling Product Processing Using PDS: Procedure**
 - **Set timer intervals (subordinate procedure) as necessary**
 - **Observe information displayed on the Main OI Screen**
 - **Specify job selection criteria (subordinate procedure) as necessary**
 - **Use the OI Detail Screen (subordinate procedure) as necessary**
 - **Observe information displayed on the Main OI Screen and Job Monitor Main Window**
 - **Perform subordinate procedures as necessary**
 - **Repeat preceding steps as necessary to monitor/control jobs**

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Monitoring/Controlling Product Processing Using PDS: Subordinate Procedures**
 - **Setting Timer Intervals (to set the amount of time between refresh events for the OI Main Screen and/or the amount of time between episodes of processing the status files from the product generation code)**
 - **Specifying Job Selection Criteria (to specify the selection and sorting criteria for jobs to be displayed on the OI Main Screen)**
 - **Using the OI Detail Screen (to determine the status of units associated with a particular job or take action with respect to units associated with a particular job)**
 - **Activating a Job (to activate a job)**
 - **Stopping/Terminating a Job (to suspend a job)**

Monitoring/Controlling Product Processing Using PDS (Cont.)



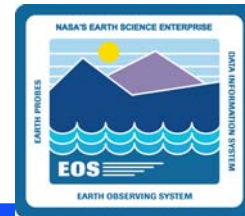
- **Monitoring/Controlling Product Processing Using PDS: Subordinate Procedures (Cont.)**
 - Responding to a Status of QC-Hold (Performing a QC Check or Verification) (to perform a QC check or media verification)
 - Completing a Job (to complete a job after a QC check)
 - Entering Notes about a Job (to enter comments or notes about a job)
 - Promoting a Job (to process a job ahead of other jobs)
 - Canceling a Job (not supported by the operator tools)
 - Generating PDS Production Reports (to generate PDS reports)

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Monitoring/Controlling Product Processing Using PDS: Subordinate Procedures (Cont.)**
 - **Selecting an Alternate Printer (to select an alternate printer for printing reports or jewel-case inserts)**
 - **Troubleshooting PDS Problems (to troubleshoot problems/failures affecting product processing)**

Monitoring/Controlling Product Processing Using PDS (Cont.)



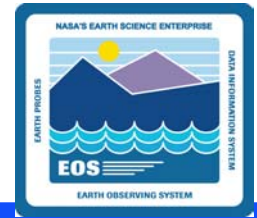
- **Setting Timer Intervals**
 - **Two timers can be set:**
 - » **Refresh Timer [amount of time (in minutes) between refresh events for the OI Main Screen]**
 - » **Status Timer [amount of time (in minutes) between episodes of processing the status files from the product generation code]**
 - **Timer changes do not affect the default values for the timers**
 - **The changed values are in effect until they are changed again or a shutdown occurs**
 - **The default values in the database are used each time the OI is started up**

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Setting Timer Intervals: Procedure**
 - Select Display → Timers from the pull-down menu on the Main OI Screen
 - To change the refresh timer setting type the desired value (in minutes) in the Refresh Timer field
 - To change the status timer setting type the desired value (in minutes) in the Status Timer field
 - Click on the Return button
 - Return to the procedure for Monitoring/Controlling Product Processing Using PDS

PDSOI: Set Timer Intervals Dialog Box



Set Timer Intervals

Refresh Timer Minutes

Status Timer Minutes

Return

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Specifying Job Selection Criteria**
 - **Jobs to be displayed on the Main OI Screen can be selected and/or sorted using the PDSOI Selection Criteria Screen**
 - **Selection can be done on the basis of the following criteria, either individually or in combination:**
 - » **Priority**
 - » **Product Media [type]**
 - » **Due Date**
 - » **Product Code**

Monitoring/Controlling Product Processing Using PDS (Cont.)



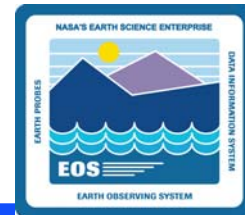
- **Specifying Job Selection Criteria (Cont.)**
 - **Jobs can be sorted on the following fields, either individually or in combination:**
 - » **Job Key**
 - » **Priority**
 - » **Job Status**
 - » **Product Media**
 - » **Project Id**
 - » **Product Code**
 - » **Due Date**

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Specifying Job Selection Criteria: Procedure**
 - **Select Display → Data/Sort from the pull-down menu on the Main OI Screen**
 - **Choose selection criteria**
 - **Assign sorting order for sorting criteria**
 - **Click on the Execute button**
 - **Return to the procedure for Monitoring/Controlling Product Processing Using PDS**

PDSOI: Selection Criteria Screen



Selection Criteria

Priority	Product Media	Due Date	Product Code
<input type="checkbox"/> All	<input type="checkbox"/> All	<input type="checkbox"/> All	<input type="checkbox"/> All
<input type="checkbox"/> 1	<input type="checkbox"/> 3460	<input type="checkbox"/> Past Due	<input type="checkbox"/> DRCHSR
<input type="checkbox"/> 2	<input type="checkbox"/> 3490	<input type="checkbox"/> Today	<input type="checkbox"/> DRCORE
<input type="checkbox"/> 3	<input type="checkbox"/> 8H	<input type="checkbox"/> 1 Week	<input type="checkbox"/> DRCTMS
<input type="checkbox"/> 4	<input type="checkbox"/> 8L		<input type="checkbox"/> DEM
<input type="checkbox"/> 5	<input type="checkbox"/> en		<input type="checkbox"/> DLG
<input type="checkbox"/> 6	<input type="checkbox"/> CDRMG		<input type="checkbox"/> D0110
<input type="checkbox"/> 8	<input type="checkbox"/> CDRCS		<input type="checkbox"/> D00C
<input type="checkbox"/> 9	<input type="checkbox"/> CDRMG		<input type="checkbox"/> D00F
	<input type="checkbox"/> 3		<input type="checkbox"/> D00A
	<input type="checkbox"/> 4		
	<input type="checkbox"/> 5		
	<input type="checkbox"/> 6		
	<input type="checkbox"/> 7		

Sort By

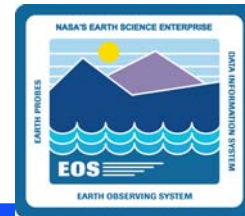
<input type="checkbox"/> 1 Job Key	<input type="checkbox"/> Product Media	<input type="checkbox"/> Product Code
<input type="checkbox"/> Priority	<input type="checkbox"/> Project Id	<input type="checkbox"/> Due Date
<input type="checkbox"/> 2 Job Status		

Monitoring/Controlling Product Processing Using PDS (Cont.)



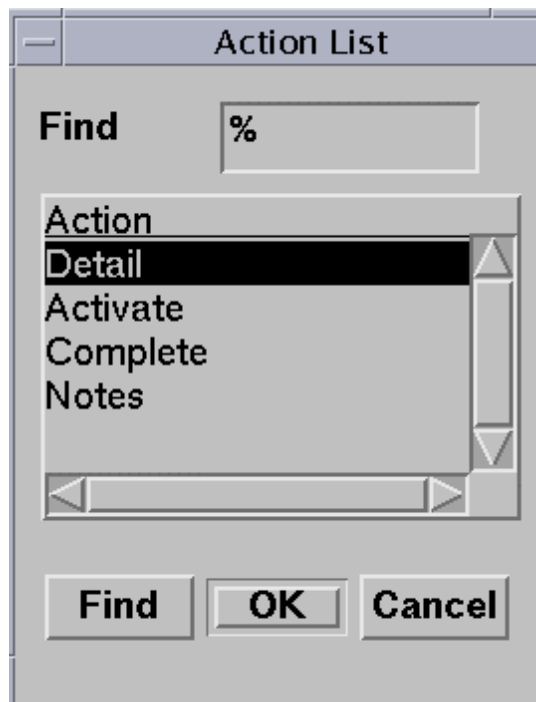
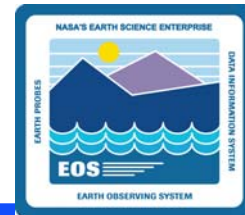
- **Using the OI Detail Screen**
 - **Provides a means of accomplishing the following objectives:**
 - » **Obtaining specific information with respect to units associated with a particular job**
 - » **Taking action with respect to units associated with a particular job**
 - **It is recommended that the operator not stay in the Detail window for long periods of time because the processing initiated by the Main screen timers will not occur while the Detail window is open**
 - **If the Detail window is left open for a long time, the amount of processing that might occur when the Detail window was closed could be extensive and might cause the Main screen to be inactive for quite a period of time**

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Using the OI Detail Screen: Procedure**
 - Click on the action button at the beginning of the job line for the relevant job on the Main OI Screen
 - Select (highlight) Detail in the Action List box
 - Click on the OK button
 - Observe information displayed on the OI Detail Screen
 - Select a unit for the application of an action if necessary
 - To activate unit(s), click on the Activate button
 - To complete unit(s) [e.g., the unit(s) has (have) passed the QC check] click on the Complete button
 - To stop the job (that includes the units) select Stop Job from the pull-down menu
 - Repeat steps as necessary

PDSOI: Action List Box



Monitoring/Controlling Product Processing Using PDS (Cont.)



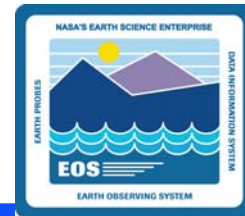
- **Sorting Units**
 - Units displayed on the OI Detail Screen can be sorted using the Sort Dialogue Box
 - Sorting can be done on the basis of the following criteria, either individually or in combination:
 - » Unit Nbr [number] (default sort preference that is used whenever the OI Detail Screen is opened)
 - » Unit Status
 - » PPF Key

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Sorting Units: Procedure**
 - **Select Display → Sort from the pull-down menu on the OI Detail Screen**
 - **Assign sorting order for sorting criteria**
 - **Click on the Execute button**
 - **Return to the procedure for Using the OI Detail Screen**

PDSOI: Sort Dialogue Box



Sort By

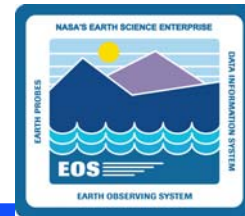
<input type="text" value="1"/>	Unit Nbr	<input type="text"/>	Unit Status	<input type="text"/>	PPF Key
<input type="button" value="Cancel"/>			<input type="button" value="Execute"/>		

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Selecting Multiple Units: Procedure**
 - **Select Select → Range from the pull-down menu on the OI Detail Screen**
 - **Type the unit number of the first unit in the range of units to be selected in the Begin Unit field**
 - **Type the unit number of the last unit in the range of units to be selected in the End Unit field**
 - **Click on the Select Units button**
 - **Return to the procedure for Using the OI Detail Screen**

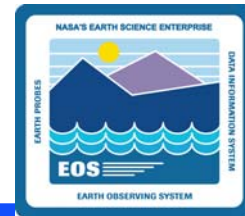
PDSOI: Range Dialogue Box



Range Selection

Begin Unit End Unit

Monitoring/Controlling Product Processing Using PDS (Cont.)



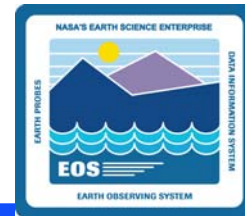
- **Activating a Job**
 - The Main OI Screen provides a means of activating jobs that are in a Pending status
 - The Activate option is available just once for each job
 - If it is necessary to reactivate the same job, the activation must be done at the detail level, which is accomplished using the OI Detail Screen
 - The Media Drive Selection window provides a means of designating the drive (i.e., tape drive or CD writer) to be used for a job
 - After the job has retrieved all data for the product the Media Drive Selection window is displayed until the Distribution Technician selects a device for writing the data

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Activating a Job (Cont.)**
 - The Media Drive Selection window is not displayed for Rimage units if AutoRimage mode has been enabled
 - » AutoRimage may be enabled on systems that have multiple Rimage units only
 - » It should be disabled at sites that have a single Rimage unit

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Activating a Job: Procedure**
 - If the job to be activated is a large job, determine whether all units for the order are included in the pending job displayed on the PDS Main OI Screen
 - » Refer to the procedure for Comparing the Number of Units in an Order and a Job
 - Click on the action button at the beginning of the job line for the relevant job (on the Main OI Screen)
 - Select (highlight) Activate in the Action List box
 - Click on the OK button
 - If the job is a CD or DVD job, ensure that the input bins of the Rimage unit contain blank disks
 - If the data are to be recorded on a tape, ensure that there is a blank tape in the drive (if applicable)

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Activating a Job: Procedure (Cont.)**
 - If the data are to be recorded on a tape, wait for the drive to come on line
 - In the Media Drive Selection window click on (highlight) the drive (i.e., tape drive or CD writer) to be used for the job
 - Click on the OK button
 - Return to the procedure for Monitoring/Controlling Product Processing Using PDS

Media Drive Selection Window



Media Drive Selection Window

Items Comment generic production for 0000103210015_0002

cdimage1	cdr	g0dig06	----	/pdssa/rimage_job
----------	-----	---------	------	-------------------

Media II CD-R Density 0

Selection

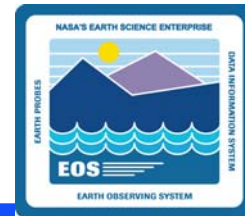
Ok system1 e_selection_pushbutton

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Comparing the Number of Units in an Order and a Job**
 - The procedure may be performed as part of the procedure for Activating a Job
 - Purpose
 - » Determine whether all units for a large order are included in a pending job that is displayed on the PDS Main OI Screen
 - » Decide whether to activate the job or wait until the data for more or all units in the order become available

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Comparing the Number of Units in an Order and a Job (Cont.)**
 - **Involves a comparison between the number of units in the order on the PDSIS OI Detail Screen and the number of units specified on the Main OI Screen**
 - » **If the number of units in the PDSIS order were greater than the number of units in the corresponding PDSSA job and the job was activated, only the units that were accessible to PDSSA would be copied to the specified medium**
 - » **Depending on the circumstances (including DAAC policy) activating part of an order may be acceptable**
 - » **However, for high-capacity media types such as DLT, activation of a partial job could be a very inefficient use of the media**

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Comparing the Number of Units in an Order and a Job (Cont.)**
 - Discrepancies in the number of units in an order and the number of units in the corresponding job are generally due to PDSIS data “grouping” (also known as “chunking”)
 - Possible grouping factors (only one is in effect at a time):
 - » Granule size
 - » Group limits

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Comparing the Number of Units in an Order and a Job (Cont.)**
 - **Granule Size**
 - » PDSIS makes a chunk of a large order available to PDSSA after a specified number of megabytes of data have been received from ECS
 - » Granule size limit is specified in the `group_data_size` column of the `pdsis_serverconfig_tbl` database table
 - » If the total size of an order is smaller than the granule size limit, granule-size grouping is irrelevant for that order

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Comparing the Number of Units in an Order and a Job (Cont.)**
 - **Group Limits**
 - » **PDSIS makes a chunk of an order available to PDSSA when a specified number of units has been received from ECS**
 - » **The number of units is specified in the group_unit_size column of the pdsis_serverconfig_tbl database table**
 - » **If the value is NULL, all units are made available to PDSSA only after all unit data have been staged by ECS**
 - » **If the total number of units in an order is less than the group limit, group-limit grouping is irrelevant for that order**

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Comparing the Number of Units in an Order and a Job (Cont.)**
 - The grouping factor in use is specified by the value in the `grouping_config` column of the `pdsis_serverconfig_tbl` database table
 - Valid grouping values for the `pdsis_serverconfig_tbl` are as follows:
 - » S = “granule size” grouping
 - » G = “group limits” grouping
 - To determine the current grouping factor use the procedure for Determining the Current Grouping Factor
 - The grouping factor is relevant for orders that are larger than the value assigned to the current grouping factor only

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Comparing the Number of Units in an Order and a Job: Procedure**
 - **Activate the PDSIS OI Detail Screen for the order to be filled**
 - **Scroll to the bottom of the PDSIS OI Detail Screen to find the last unit in the order**
 - **Observe the number of units in the To_Do Units column for the corresponding job on the Main OI Screen**
 - **Compare the number of units in the order on the PDSIS OI Detail Screen with the number of units specified in the To_Do Units column for the corresponding job on the Main OI Screen**
 - **If all units currently available to PDSSA should be activated immediately, activate the job**

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Comparing the Number of Units in an Order and a Job: Procedure (Cont.)**
 - If some of the units currently available to PDSSA should be activated immediately, activate the applicable units
 - If none of the units currently available to PDSSA should be activated immediately, wait until the appropriate number of units is available to PDSSA before continuing
 - If it was necessary to wait until the appropriate number of units became available to PDSSA before continuing, repeat steps as necessary

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Determining the Current Grouping Factor**
 - It may be necessary to determine the current grouping factor when comparing the number of units in an order and a job

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Determining the Current Grouping Factor: Procedure**
 - **Start the PDSIS Maintenance Module**
 - **Click on the Server Config button**
 - **Click on the Execute Query button**
 - **Observe the value in the Grouping Config field of the Server Config Maintenance window**
 - » **S = “granule size” grouping**
 - » **G = “group limits” grouping**
 - **Observe the value in the Group Data Size field**
 - **Observe the value in the Group Unit Size field**
 - **Click on the Exit button**
 - **Click on the Exit button (PDSIS Maintenance Module Main Menu window)**

PDSIS Maintenance Module: Server Config Maintenance Window



Server Config Maintenance

Action Block Record Field Edit Query Help

PDSISMPST 1.3 PDSIS 29-JUN-2002

ECS Status	<input type="checkbox"/>	Grouping Config	<input type="checkbox"/>
Server Mode	<input type="checkbox"/>	Group Data Size	<input type="text"/>
Server Retries	<input type="text"/>	Group Unit Size	<input type="text"/>
Log Archive	<input type="checkbox"/>	Days Purge	<input type="text"/>
Sybase Connect	<input type="checkbox"/>		
Usage Threshold	<input type="text"/>	Usage Current	<input type="text"/>
DAAC Name	<input type="text"/>		
DAAC Contact	<input type="text"/>		
DAAC Address	<input type="text"/>		
DAAC City	<input type="text"/>		
DAAC State	<input type="text"/>	DAAC Zip	<input type="text"/>
DAAC Country	<input type="text"/>		
DAAC Phone	<input type="text"/>		
DAAC Fax	<input type="text"/>		
DAAC Email	<input type="text"/>		
DAAC Preamble	<input type="text"/>		
Receive Preamble	<input type="text"/>		
Threshold Release	<input type="checkbox"/>	Email Notification	<input type="checkbox"/>

List Execute Query Last Criteria Cancel Query Count Hits

Enter a query; press Alt-F11 to execute, Control-F4 to cancel.
Record: 1/1 Enter-Query Insert

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Stopping a Job**
 - The Main OI Screen and the Job Monitor Main Window provide means of stopping/terminating (**suspending**) jobs
 - Note that if a job has proceeded to the stage where the data are being written to the specified medium that process (writing to the medium) continues even after an attempt to stop/terminate the job
 - The following procedures are included:
 - » Stopping/Terminating a Job Using the Main OI Screen Display
 - » Stopping/Terminating a Job Using the Job Monitor Main Window
 - The procedures are rarely used

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Stopping/Terminating a Job Using the Main OI Screen Display: Procedure**
 - Click on the action button at the beginning of the job line for the relevant job on the Main OI Screen
 - Select (highlight) Stop Job in the Action List box
 - Click on the OK button
 - Click on the Yes button in the confirmation dialogue box
 - Return to the procedure for Monitoring/Controlling Product Processing Using PDS

Monitoring/Controlling Product Processing Using PDS (Cont.)



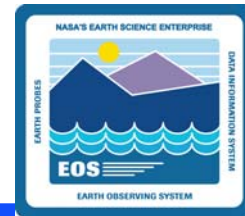
- **Stopping/Terminating a Job Using the Job Monitor Main Window: Procedure**
 - Place the mouse cursor on the relevant job (the one to be suspended) in the running job list of the Job Monitor Main Window and click and hold the right mouse button
 - Select Terminate Job from the pop-up menu
 - Click on the Proceed button in the confirmation window

Monitoring/Controlling Product Processing Using PDS (Cont.)



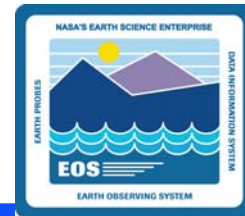
- **Responding to a Status of QC-Hold (Performing a QC Check or Verification)**
 - A status of QC-Hold on the PDS Operator Interface (PDSOI) indicates that a job requires a QC check or media verification
 - The PDS Verification Tool provides a means of selecting a verification drive for checking a disk or tape

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Responding to a Status of QC-Hold (Performing a QC Check or Verification): Procedure**
 - Retrieve the product summary from the printer
 - Review the product summary
 - Remove the medium (tape or disk) from the unit
 - Set the write-protect switch (tapes only)
 - Affix the tape label (tapes only)
 - Insert the jewel-case insert in a jewel case (disk only)
 - Identify an available drive using Verification Tool
 - Load the medium (tape or disk) in an available drive
 - Wait for the drive to come on line before continuing
 - On the PDS Verification Tool click on the button corresponding to the loaded drive

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Responding to a Status of QC-Hold (Performing a QC Check or Verification): Procedure (Cont.)**
 - When verification is complete, remove the medium from the drive
 - Insert the medium in its case
 - Review the verification report for read errors
 - Gather the medium (in its case), product summary, and verification report
 - Perform the procedure for Completing a Job
 - Put the shipping label and packing list with the medium (in its case) in the appropriate area for pick-up by or delivery to the shipping function
 - Mark the job "Shipped" using the PDSIS OI
 - Return to the procedure for Monitoring/Controlling Product Processing Using PDS

Monitoring/Controlling Product Processing Using PDS (Cont.)



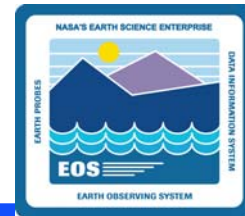
- **Completing a Job**
 - The Main OI Screen provides a means of completing jobs that are in a QC-Hold status once they have passed the QC check
 - The "Complete" action first checks the status of the units of the job
 - » If any unit(s) of the job is (are) not in QC-Hold status, some unit(s) may not be ready for completion
 - » Consequently, the completion must be performed using the OI Detail Screen as described in the procedure for Using the OI Detail Screen (preceding section of this lesson)

Monitoring/Controlling Product Processing Using PDS (Cont.)



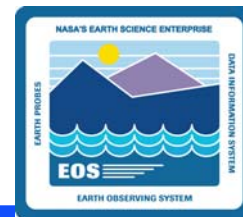
- **Completing a Job: Procedure**
 - Click on the action button at the beginning of the job line for the relevant job on the Main OI Screen
 - Select (highlight) Complete in the Action List box
 - Click on the OK button
 - Return to the procedure for Monitoring/Controlling Product Processing Using PDS

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Entering Notes about a Job**
 - The Main OI Screen provides a means of entering comments or notes about jobs
 - If a note has been entered for a job, an “*” is displayed in the Note field of the Main OI Screen
- **Procedure**
 - Click on the action button at the beginning of the job line for the relevant job on Main OI Screen
 - Select (highlight) Notes in the Action List box
 - Click on the OK button
 - Type appropriate text in the Job Notes dialogue box
 - Click on the Return button to dismiss the Job Notes dialogue box and return to the Main OI Screen
 - Return to the procedure for Monitoring/Controlling Product Processing Using PDS

PDSOI: Job Notes Dialogue Box



Job Notes

An I/O error was found on the 2nd volume of the CD set.
I think that this is due to a failure on CD-R drive
3 for Rimage D. Took sgs99 down for OS upgrade. Please
revisit this error during graves. Called Terry B.
-bob

Return

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Promoting a Job**
 - A job would most likely be promoted at the request of User Services
 - The only practical means of promoting jobs is to activate the pending job ahead of any other pending jobs
- **Canceling a Job**
 - Jobs are not normally canceled using the PDSSA operator tools
 - Refer to the procedure for Rejecting a Unit/Order (subsequent section of this lesson)

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Generating PDS Production Reports: Procedure**
 - For a report that contains the data currently being displayed Main OI Screen, select **Reports → Queue** from the pull-down menu on the Main OI Screen
 - For a report of all orders that still need to be produced (broken down by various time frame ranges), select **Reports → Lag** from the pull-down menu
 - For an error report concerning a particular job, first click in one of the fields on the job line for the relevant job
 - For an error report concerning a particular job, select **Reports → Error** from the pull-down menu

Monitoring/Controlling Product Processing Using PDS (Cont.)



- **Selecting an Alternate Printer: Procedure**
 - Click on Printers on the menu bar of the Main OI Screen
 - Select the desired printer from the applicable option button (either Report Printer or Jewel-Case Insert Printer)
 - If an alternate printer is to be designated for the other type of printer, repeat the preceding step for the other printer
 - Click on the Return button
 - Return to the procedure for Generating PDS Production Reports or the procedure for Monitoring/Controlling Product Processing Using PDS (as applicable)

PDSOI: Default Printers



Default Printers

Report Printer

Jewel Case Printer

Monitoring/Controlling Order Processing Using the PDSIS OI



- **PDSIS Monitoring Activities**
 - **Monitoring/controlling order processing using the PDSIS OI involves the following activities (among others):**
 - » **Determining the Status of an Order**
 - » **Determining the Status of Units Associated with an Order**
 - » **Marking a Job Shipped**
 - » **Rejecting a Unit/Order**

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



- **PDSIS Monitoring Activities (Cont.):
PDSIS OI Main Screen**
 - **Action Button [not labeled]**
 - » **Allows access to a list of actions that can be taken with respect to the order**
 - **Order Nbr**
 - » **Unique PDS order number given to the customer request**
 - » **The software creates an order number each time the ECS VOGW sends an order**
 - **Ecs Ordid**
 - » **ECS order number for the customer request in the MSS database**

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



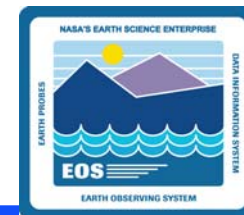
- **PDSIS Monitoring Activities (Cont.):
PDSIS OI Main Screen**
 - **Ecs Reqid**
 - » ECS Request ID number for the customer request in the MSS database
 - **Sta**
 - » PDSIS status of the order
 - **Status Date**
 - » Last date any database status has changed on the order
 - **Date Entered**
 - » Date when the order was entered in the system

PDSIS OI Main Screen



PDSIS Orders						
Display		Report		Action		
PDSISMT0IX		1.0		PDSIS		22-MAR-2001
Order Nbr	Ecs OrdId	Ecs ReqId	Sta	Status	Date	Date Entered
<input type="checkbox"/> 0000103210005	00000966	00	C		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210006	00000968	00	C		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210007	00000969	00	C		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210008	00000971	00	C		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210009	00000972	00	I		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210010	00000973	00	C		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210011	00000974	00	I		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210012	00000975	00	C		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210013	00000976	00	C		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210014	00000977	00	I		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210015	00000979	00	I		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210016	00000980	00	C		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210017	00000981	00	C		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210018	00000982	00	I		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210019	00000983	00	C		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210020	00000984	00	I		21-MAR-2001	21-MAR-2001
<input type="checkbox"/> 0000103210021	00000985	00000936	I		21-MAR-2001	21-MAR-2001
Record: 1/?						
Insert						

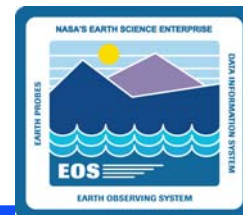
PDSIS OI Detail Screen



PDSIS Unit Information									
Display		Action							
PDSISMT0ID		1.0		PDSIS		13-APR-2001			
Order Number	ECS Order ID	ECS Req ID	Status						
0000104030342	00001072	00001056	I						
Unit Number	Ordering ID	Prod Code	Output Specs	Subset Data	Size	Status	Status Date		
<input type="checkbox"/> 1	SC:MOD020BC.001:55645	6001	DLUCS	N	58	0	03-APR-2001		
<input type="checkbox"/> 2	SC:MOD020BC.001:55979	6001	DLUCS	N	58	0	03-APR-2001		
<input type="checkbox"/> 3	SC:MOD020BC.001:56389	6001	DLUCS	N	58	0	03-APR-2001		
<input type="checkbox"/> 4	SC:MOD020BC.001:56492	6001	DLUCS	N	58	0	03-APR-2001		
<input type="checkbox"/> 5	SC:MOD020BC.001:67889	6001	DLUCS	N	58	0	03-APR-2001		
<input type="checkbox"/> 6	SC:MOD020BC.001:69649	6001	DLUCS	N	58	0	03-APR-2001		
<input type="checkbox"/> 7	SC:MOD020BC.001:77206	6001	DLUCS	N	58	0	03-APR-2001		
<input type="checkbox"/> 8	SC:MOD020BC.001:77443	6001	DLUCS	N	58	0	03-APR-2001		
<input type="checkbox"/> 9	SC:MOD020BC.001:78366	6001	DLUCS	N	58	0	03-APR-2001		
<input type="checkbox"/> 10	SC:MOD020BC.001:78690	6001	DLUCS	N	58	0	03-APR-2001		
<input type="checkbox"/>									
<input type="checkbox"/>									
<input type="checkbox"/>									
<input type="checkbox"/>									
<input type="checkbox"/>									

Record: 1/10 Insert

PDSIS OI Error Screen



PDSIS Errors Screen

PDSISMTERR

1.0

PDSIS

13-APR-2001

	Date/Time	Order Number	Unit Number	Error Source	Error Message
<input type="checkbox"/>	20010328123908	0000103210003		SendMailRequest.MailRequester	There was an error sending cu
<input type="checkbox"/>	20010328012409	0000103280141	1	PdsinfoTbl.SetOrderUnit	No entry in pdt_pdsinfo_infor
<input type="checkbox"/>	20010328012409	0000103280141	1	ReportUtil.orderReport	Missing entry in pdsinfo_tbl
<input type="checkbox"/>	20010328012708	0000103280142	1	PdsinfoTbl.SetOrderUnit	No entry in pdt_pdsinfo_infor
<input type="checkbox"/>	20010328012709	0000103280142	1	ReportUtil.orderReport	Missing entry in pdsinfo_tbl
<input type="checkbox"/>	20010328012709	0000103280143	1	PdsinfoTbl.SetOrderUnit	No entry in pdt_pdsinfo_infor
<input type="checkbox"/>	20010328012709	0000103280143	1	ReportUtil.orderReport	Missing entry in pdsinfo_tbl
<input type="checkbox"/>	20010328012710	0000103280144	1	PdsinfoTbl.SetOrderUnit	No entry in pdt_pdsinfo_infor
<input type="checkbox"/>	20010328012710	0000103280144	1	ReportUtil.orderReport	Missing entry in pdsinfo_tbl
<input type="checkbox"/>	20010328025857	0000103280170	1	ScliInterface.ExecutesCli	Scli execution error
<input type="checkbox"/>	20010328025857	0000103280170	1	EcsDataRequest.ScliRequest	Error executing SCLI
<input type="checkbox"/>	20010328025859	0000103280170	1	ScliInterface.ExecutesCli	Scli execution error
<input type="checkbox"/>	20010328025859	0000103280170	1	EcsDataRequest.ScliRequest	Error executing SCLI
<input type="checkbox"/>	20010328105509	0000103280175	4	PdsinfoTbl.SetOrderUnit	No entry in pdt_pdsinfo_infor
<input type="checkbox"/>	20010328105510	0000103280175	5	PdsinfoTbl.SetOrderUnit	No entry in pdt_pdsinfo_infor
<input type="checkbox"/>	20010328051809	0000103280161	1	PdsinfoTbl.SetOrderUnit	No entry in pdt_pdsinfo_infor
<input type="checkbox"/>	20010328052109	0000103280162	1	PdsinfoTbl.SetOrderUnit	No entry in pdt_pdsinfo_infor
<input type="checkbox"/>	20010328105510	0000103280175	6	PdsinfoTbl.SetOrderUnit	No entry in pdt_pdsinfo_infor
<input type="checkbox"/>	20010328105510	0000103280175	7	PdsinfoTbl.SetOrderUnit	No entry in pdt_pdsinfo_infor
<input type="checkbox"/>	20010328105510	0000103280175	8	PdsinfoTbl.SetOrderUnit	No entry in pdt_pdsinfo_infor

Return

Record: 1/?

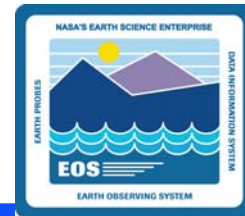
Insert

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



- **PDSIS Monitoring Activities (Cont.):**
PDSIS OI Detail Screen (for the selected individual PDS order)
 - **Order Number**
 - » Unique PDS order number given to the customer request
 - **ECS Order ID**
 - » ECS order number of the customer request in the MSS database
 - **ECS Req ID**
 - » ECS Request ID number of the customer request in the MSS database
 - **Status**
 - » PDSIS status of the order

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



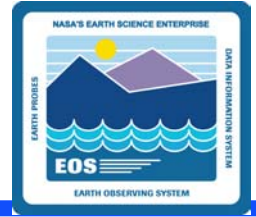
- **PDSIS Monitoring Activities (Cont.):**
PDSIS OI Detail Screen (for each unit within the selected PDS order)
 - **Action Button [not labeled]**
 - » Allows access to a list of actions that can be taken with respect to the job
 - **Unit Number**
 - » Unit number
 - **Ordering ID**
 - » Unique reference for the relevant granule in the ECS archive
 - **Prod Code**
 - » PDSIS's description of the product code
 - » It is loaded from customizable tables

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



- **PDSIS Monitoring Activities (Cont.):
PDSIS OI Detail Screen (for each unit within
the selected PDS order) (Cont.)**
 - **Output Specs**
 - » PDSSA's description of the output specifications
selected by the customer
 - **Subset Data**
 - » Yes/No flag indicating whether the unit is a subsetted
request (L7 floating scene)
 - **Size**
 - » Size in MB of the granule
 - » May be an estimate in some cases

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



- **PDSIS Monitoring Activities (Cont.):**
PDSIS OI Detail Screen (for each unit within the selected PDS order) (Cont.)
 - **Status**
 - » PDSIS status of the order
 - **Status Date**
 - » Last date any database status has changed on the unit

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



- **PDSIS Monitoring Activities (Cont.):
PDSIS OI Error Screen**
 - **Action Button [not labeled]**
 - » Allows access to a list of actions that can be taken with respect to the item
 - **Date/Time**
 - » Time when the error occurred
 - **Order Number**
 - » Order number of the order in which the error occurred
 - **Unit Number**
 - » PDS unit number in which the error occurred

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



- **PDSIS Monitoring Activities (Cont.):
PDSIS OI Error Screen (Cont.)**
 - **Error Source**
 - » Source of the error
 - **Error Message**
 - » PDSIS coded error message

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



- **Monitoring/Controlling Order Processing Using the PDSIS OI: Procedure**
 - **Observe information displayed on the PDSIS OI Main Screen**
 - **Use the PDSIS OI Detail Screen (subordinate procedure) as necessary**
 - **Perform subordinate procedures as necessary**
 - » **Using the PDSIS OI Detail Screen (to determine the status of units or take action with respect to units)**
 - » **Marking a Job Shipped (to mark a completed job shipped)**
 - » **Rejecting a Unit/Order (to change the status of a unit or order to "X" ("Reject"))**
 - » **Troubleshooting PDS Problems (to troubleshoot problems/failures affecting order processing)**
 - **Repeat preceding steps as necessary to monitor/control orders**

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



- **Monitoring/Controlling Order Processing Using the PDSIS OI: Subordinate Procedures**
 - Using the PDSIS OI Detail Screen (to determine the status of units associated with a particular order or take action with respect to units associated with a particular order)
 - Marking a Job Shipped (to mark a completed job shipped)
 - Rejecting a Unit/Order (to change the status of a unit or order to "X" ("Reject"), effectively canceling the unit or order)
 - Troubleshooting PDS Problems (to troubleshoot problems/failures affecting order processing)

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



- **Using the PDSIS OI Detail Screen**
 - **Provides a means of accomplishing the following objectives:**
 - » **Obtaining specific information with respect to units associated with a particular order**
 - » **Taking action with respect to units associated with a particular order**

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



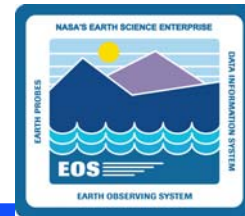
- **Using the PDSIS OI Detail Screen: Procedure**
 - Click on the action button at the beginning of the job line for the relevant job on the Main OI Screen
 - Select (highlight) Details in the Action List box
 - Click on the OK button
 - Observe information displayed on the PDSIS OI Detail Screen
 - If it is desirable to see the error(s) associated with a particular unit, perform the procedure for Checking/Clearing Errors on PDSIS (subsequent section of this lesson)
 - If it becomes necessary to reject unit(s), perform the procedure for Rejecting a Unit/Order (subsequent section of this lesson)
 - Repeat steps as necessary to obtain additional information and/or take action with respect to units associated with the order

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



- **Marking a Job Shipped**
 - The PDSIS OI Main Screen provides a means of marking a completed job shipped
- **Marking a Job Shipped: Procedure**
 - Verify that the following conditions have been met:
 - » The Sta [status] of the job (as displayed on the PDSIS OI Main Screen) is C (completed)
 - » The packing lists for the job have been printed
 - » The shipping labels for the job have been printed
 - Click on the action button at the beginning of the relevant order status line
 - Select (highlight) Ship in the Action List box
 - Click on the OK button

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



- **Rejecting a Unit/Order**
 - Both the PDSIS OI Main Screen and the PDSIS OI Detail Screen provide means of rejecting a unit/order

CAUTION

Before rejecting a unit or order it is advisable to have in hand written authorization to do so.

Selecting "Reject" changes the status of the unit or order to a Reject (X) or cancelled state. Care is recommended because the reject function does not have a confirmation button. All units in process will be marked for rejection and no further processing will occur. The customer's completion report will reflect the specified unit as having a Reject status.

Monitoring/Controlling Order Processing Using PDSIS OI (Cont.)



- **Rejecting a Unit/Order: Procedure**
 - Click on the action button at the beginning of the relevant order status line or unit line
 - Select (highlight) Reject in the Action List box
 - Click on the OK button
 - Return to the procedure being performed before the action button was selected; either...
 - » Monitoring/Controlling Order Processing Using the PDSIS OI or
 - » Using the PDSIS OI Detail Screen

Using the PDS and PDSIS Cleanup Managers



- **Using the PDS Cleanup Manager**
 - **GUI used for specifying a file cleanup strategy for the following types of PDSSA files:**
 - » **Summary files**
 - » **Master list files**
 - » **Log files**
 - » **Operator Interface log files**
 - » **Status files**
 - » **Jewel-case insert files**
 - » **Label files**
 - » **Text files**
 - » **TIFF (Tag Image File Format) files**
 - **The PDSIS Cleanup Manager is used for specifying a file cleanup strategy for PDSIS files**

Using the PDS and PDSIS Cleanup Managers (Cont.)



- **PDS Cleanup Manager (Cont.)**
 - **Generates or modifies a Bourne shell script (i.e., cleanup.sh) that implements the file cleanup strategy**
 - » **In addition, the PDS Cleanup Manager may modify the crontab file to adjust the time intervals for deletion or archiving of files**
 - **The large number of files generated by PDSSA activities would overwhelm the system if some of the files were not removed from the working directories on a fairly frequent basis**
 - » **However, some files may be required for a limited period of time in order to troubleshoot a job if there is a problem with it or if it is returned from the customer**
 - **PDS Cleanup Manager is not used very often, especially if a manageable retention period has been established for PDSSA files**

Using the PDS and PDSIS Cleanup Managers (Cont.)



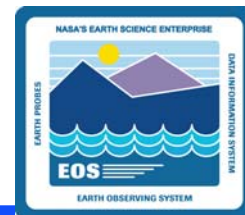
- **Using the PDS Cleanup Manager: Procedure**
 - Access a terminal window logged in to the PDS Server
 - Change current directory to the “run” directory
 - Type the command to start the PDS Cleanup Manager GUI
 - Click on either the Archive or Delete radio button (as applicable) to the right of the types of files to be archived or deleted
 - Type the number of days after which files of that type are to be either archived or deleted
 - Click on the “Delete any files older than” radio button (if applicable)
 - In the text box type the appropriate number of days (older than which files should be deleted) (if applicable)

Using the PDS and PDSIS Cleanup Managers (Cont.)



- **Using the PDS Cleanup Manager: Procedure (Cont.)**
 - Type the time when the cleanup should run in the “Run cleanup daily at” fields
 - Click on either the AM or PM radio button (as applicable)
 - Click on the Apply & Exit button
 - Click on the Proceed button

PDS Cleanup Manager



PDS Cleanup Manager

Summary Directory

Summary files:	<input checked="" type="checkbox"/> Archive <input checked="" type="checkbox"/> Delete	after	<input type="text" value="7"/>	days
Masterlist files:	<input type="checkbox"/> Archive <input type="checkbox"/> Delete	after	<input type="text" value=""/>	days
Log files:	<input checked="" type="checkbox"/> Archive <input checked="" type="checkbox"/> Delete	after	<input type="text" value="7"/>	days
OILog files:	<input type="checkbox"/> Archive <input checked="" type="checkbox"/> Delete	after	<input type="text" value="7"/>	days
Status files:	<input type="checkbox"/> Archive <input checked="" type="checkbox"/> Delete	after	<input type="text" value="3"/>	days
Insert files:	<input type="checkbox"/> Archive <input checked="" type="checkbox"/> Delete	after	<input type="text" value="3"/>	days

Label Directory

Label files:	<input type="checkbox"/> Archive <input checked="" type="checkbox"/> Delete	after	<input type="text" value="3"/>	days
Text files:	<input type="checkbox"/> Archive <input checked="" type="checkbox"/> Delete	after	<input type="text" value="3"/>	days
TIFF files:	<input type="checkbox"/> Archive <input checked="" type="checkbox"/> Delete	after	<input type="text" value="1"/>	days

☒ Delete any files older than days

Run cleanup daily at : ☒ AM ☐ PM

Apply & Exit **Cancel**

Using the PDS and PDSIS Cleanup Managers



- **Using the PDSIS Cleanup Manager**
 - **GUI used for specifying a file cleanup strategy for the following types of PDSIS files:**
 - » **Product request (“ODL”) files**
 - » **Product result (“Prodres”) files**
 - » **Socket log files**
 - **Generates or modifies a Bourne shell script (i.e., pdsiscleanup.sh) that implements the file cleanup strategy**
 - » **In addition, the PDSIS Cleanup Manager may modify the crontab file to adjust the time intervals for deletion or archiving of files**

Using the PDS and PDSIS Cleanup Managers (Cont.)



- **Using the PDSIS Cleanup Manager (Cont.)**
 - The large number of files generated by PDSIS activities would overwhelm the system if some of the files were not removed from the working directories on a fairly frequent basis
 - » However, some files may be required for a limited period of time in order to troubleshoot an order if there is a problem with it or if it is returned from the customer
 - PDSIS Cleanup Manager is not used very often, especially if a manageable retention period has been established for PDSIS files

Using the PDS and PDSIS Cleanup Managers (Cont.)



- **Using the PDSIS Cleanup Manager: Procedure**

NOTE: A PDSIS user ID (e.g., pdsis, pdsis_ts1, pdsis_ts2) is used in this procedure

- **Access a terminal window logged in to the PDS Server**
- **Change current directory to the “utilities” directory**
- **Type the command to start the PDSIS Cleanup Manager GUI**
- **Click on either the Archive or Delete radio button (as applicable) to the right of the types of files to be archived or deleted**
- **Type the number of days after which files of that type are to be either archived or deleted**

Using the PDS and PDSIS Cleanup Managers (Cont.)



- **Using the PDSIS Cleanup Manager: Procedure (Cont.)**
 - Click on the “Delete any files older than” radio button (if applicable)
 - In the text box type the appropriate number of days (older than which files should be deleted) (if applicable)
 - Type the time when the cleanup should run in the “Run cleanup daily at” fields
 - Click on either the AM or PM radio button (as applicable)
 - Click on the Apply & Exit button
 - Click on the Proceed button

PDSIS Cleanup Manager



PDSIS Cleanup Manager

In_msg Directory

Od1 files: ☐ Archive ☐ Delete after days

Out_msg Directory

Prodres files: ☐ Archive ☐ Delete after days

Socket Directory

SocketLog files: ☐ Archive ☐ Delete after days

☒ Delete any files older than days

Run cleanup daily at : ☐ AM ☐ PM

Troubleshooting PDS Problems



- **Trouble Symptoms**

- Troubleshooting is a process of identifying the source of problems on the basis of observed trouble symptoms
- Many problems with PDS can be traced to some part of the PDS itself
- A common source of problems involves the reliance on messages or data from other subsystems; consequently, it is possible to trace some problems to an ECS subsystem, including (but not necessarily limited to) those in the following list:
 - » Data Management Subsystem (DMS)
 - » Data Server Subsystem (DSS)
 - » System Management Subsystem (MSS)
 - » Communications Subsystem (CSS)

Troubleshooting PDS Problems



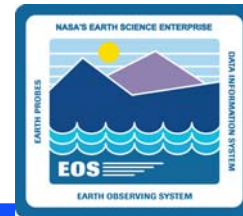
- **Trouble Symptoms (Cont.)**
 - **The general process of troubleshooting involves the following activities:**
 - » **Review the trouble symptoms**
 - » **Check the status of relevant hosts/servers (as necessary)**
 - » **Check log files (as necessary)**
 - » **Take action to correct the problem(s)**
 - **If a problem is suspected in one of the subsystems in the preceding list, refer to the section on Troubleshooting DDIST Problems**

Troubleshooting PDS Problems (Cont.)



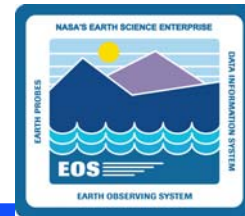
- **Troubleshooting PDS Problems**
 - **Actions to be taken in response to some common PDS problems are described in the following tables:**
 - » **General Problems**
 - » **PDS Operator Interface (PDSOI) Problems**
 - » **Job Monitor Problems**
 - » **PDS Maintenance Module Problems**
 - » **PDSIS Operator Interface (PDSIS OI) Problems**
 - » **PDSIS Maintenance Module Problems**

Troubleshooting PDS Problems (Cont.): General Problems



Symptom	Response
A selection has been made from an Action List window but the action is not invoked	Click on the OK button near the bottom of the Action List window to start the action or go to the appropriate screen.
Buttons are not visible at the bottom of the screen but they should be visible	<ol style="list-style-type: none"> 1. Move the mouse to the outside edge of the form. (The cursor changes shape.) 2. Click and hold the mouse button and move the mouse to resize the screen until the buttons are visible.
Disk label needs to be reprinted	Perform the procedure for Reprinting a Label Stamped on a Disk (subsequent section of this lesson).
Jewel-case insert did not print	Perform the procedure for Responding to a Jewel-Case Insert Printing Failure (subsequent section of this lesson).
Jewel-case insert needs to be reprinted	Perform the procedure for Responding to a Jewel-Case Insert Printing Failure (subsequent section of this lesson).
Job needs to be reprocessed [e.g., product has stalled in the media production process or fails the media quality control (QC) check]	Perform the procedure for Reprocessing a Job (subsequent section of this lesson).
Lag report includes a job that is not displayed on the PDSOI	Perform the procedure for Responding to a Job on a Lag Report (subsequent section of this lesson).
Media Drive Selection window does not appear in the workspace within a couple of minutes after a job/unit has been activated	Perform the procedure for Responding to a "Waiting for Drive Selection" Message on the Job Monitor (subsequent section of this lesson).

Troubleshooting PDS Problems (Cont.): General Problems (Cont.)



Symptom	Response
No printouts	Perform the procedure for Responding to No Printouts (Either Jewel-Case Inserts or Paper Reports) (subsequent section of this lesson).
Not all text is showing in a text box or the box appears to be too small	1. Click in the text box. 2. Move the cursor using the arrow keys. [The text scrolls in the box and hidden text becomes visible.]
Packing list for a completed order (i.e., an order with a status of "C") needs to be reprinted	Set the action flag to "S" using the PDSIS Maintenance Module as described in the procedure for Changing the Values of Order Parameters Using the PDSIS Maintenance Module (subsequent section of this lesson).
Rimage (CD or DVD) drive goes off line.	Verify that the blank media were placed in the Rimage input bins with the shiny side down.
Shipping label for a completed order (i.e., an order with a status of "C") needs to be reprinted	Set the action flag to "S" using the PDSIS Maintenance Module as described in the procedure for Changing the Values of Order Parameters Using the PDSIS Maintenance Module (subsequent section of this lesson).
Summary report is not printed but disk or tape is produced	Perform the procedure for Responding to No Printouts (Either Jewel-Case Inserts or Paper Reports) (subsequent section of this lesson).
Tape label needs to be reprinted	Perform the procedure for Reprinting PDS Documents and Labels (subsequent section of this lesson).
Units that were previously completed need to be reactivated or reset	Perform the procedure for Reactivating Units or the procedure for Resetting an Order or a Unit (as applicable) (subsequent sections of this lesson).

Troubleshooting PDS Problems (Cont.)



- **PDS Troubleshooting Procedures**
 - **Changing the Values of Job Parameters Using the PDS Maintenance Module**
 - **Changing the Values of Order Parameters Using the PDSIS Maintenance Module**
 - **Checking/Clearing Errors on PDSIS**
 - **Checking PDSSA or PDSIS Log Files**
 - **Checking/Restoring Synchronization of the Rimage PC Time with PDS System Time**
 - **Checking/Restoring the Rimage PC NFS Connection**
 - **Cleaning up the CD-R_Images Folder on the Rimage PC**
 - **Clearing an Error Displayed on the PDSIS OI Error Screen**

Troubleshooting PDS Problems (Cont.)



- **PDS Troubleshooting Procedures (Cont.)**
 - **Determining Output Specifications Using the PDS Maintenance Module**
 - **Determining Output Specifications Using the PDSIS Maintenance Module**
 - **Determining Product Codes Using the PDS Maintenance Module**
 - **Determining Product Codes Using the PDSIS Maintenance Module**
 - **Determining the Status of PDS Tape/Disk Drives**
 - **Determining Which Instance of PDSOI Was Used to Activate a Job**
 - **Forcing AutoRimage Completion**
 - **Reactivating Units**
 - **Reprinting a Label Stamped on a Disk**

Troubleshooting PDS Problems (Cont.)



- **PDS Troubleshooting Procedures (Cont.)**
 - Reprinting PDS Documents and Labels
 - Reprocessing a Job
 - Resetting an Order or Unit
 - Responding to a CD/DVD Job Error Indicated on PDSOI
 - Responding to a Jewel-Case Insert Printing Failure
 - Responding to a Job's Status Not Changing to QC-Hold Although Production is Successful
 - Responding to a Job on a Lag Report
 - Responding to a Locked-Up Screen
 - Responding to a Problem Starting PDSOI
 - Responding to a Save Changes Dialogue Box When Exiting a Maintenance Module Window

Troubleshooting PDS Problems (Cont.)



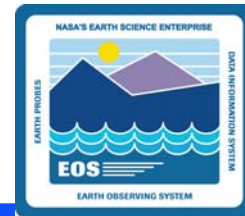
- **PDS Troubleshooting Procedures (Cont.)**
 - Responding to a "Waiting for Drive Selection" Message on the Job Monitor
 - Responding to Duplicate Jobs on the PDSOI
 - Responding to Low Disk Space
 - Responding to No Printouts (Either Jewel-Case Inserts or Paper Reports)
 - Responding to PDSOI's Failure to Update Status
 - Viewing a Job Log or Job Production Parameter File (PPF) Using UNIX Commands
 - Viewing a Job Log Using the PDS Job Monitor
 - Viewing a Job Production Parameter File (PPF) Using the PDS Job Monitor
 - Viewing an Extended Error Message

Troubleshooting PDS Problems (Cont.)



- **Changing the Values of Job Parameters Using the PDS Maintenance Module**
 - **The PDS Maintenance Module provides a means of changing values assigned to job parameters:**
 - » **Status** - may be changed (for example) to "Pending" so the job will rerun (e.g., if there was a problem with the previous run of the job)
 - » **Media type** - typically changed in response to a request from the user that has been forwarded by User Services
 - » **Output specs** - output specifications typically have to be changed if the media type is changed
 - » **Number of copies** - may be changed in response to a request from the user that has been forwarded by User Services (usually in-house orders)
 - » **Directory path for pulling data for a job** - if (for example) a problem occurs with the disk on which the normal directory resides

Troubleshooting PDS Problems (Cont.)



- **Changing the Values of Job Parameters Using the PDS Maintenance Module**
 - **The PDS Maintenance Module provides a means of changing values assigned to job parameters (Cont.):**
 - » **E-Mail address for ftp notification of completion - e.g., in response to a request from User Services**
 - **In order to maintain consistency between PDSIS packing lists and PDSSA media generation, changes to the values assigned to order/job parameters may need to be made using both the PDSIS and PDSSA maintenance modules**
 - » **Changes that affect both PDSIS and PDSSA should be made in PDSIS first, then PDSSA**
 - » **Some changes affect PDSIS only; for example, PDSSA does not contain customer shipping address information, so no shipping-address changes are necessary in PDSSA**

Troubleshooting PDS Problems (Cont.)



- **Changing the Values of Job Parameters Using the PDS Maintenance Module (Cont.)**
 - No changes are needed in PDSSA if order processing in PDSIS has not made any data for an order available to PDSSA yet

CAUTION

Before changing product media type, number of copies, or customer's e-mail address it is advisable to have in hand written authorization to do so

Troubleshooting PDS Problems (Cont.)



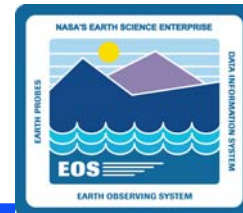
- **Changing the Values of Job Parameters Using the PDS Maintenance Module: Procedure**
 - **Start the PDS Maintenance Module**
 - **Click on the PDSINFO Jobs Table button**
 - **Copy the job key from the Main OI Screen to the PDSINFO Jobs Table**
 - **Click on the Execute Query button**
 - **Enter the new value(s) in the appropriate field(s)**
 - **Click on the Save button**
 - **Click on the Exit button**
 - **Click on the PDSINFO Work Table button**
 - **Copy the job key from the Main OI Screen**
 - **Click on the Execute Query button**

Troubleshooting PDS Problems (Cont.)



- **Changing the Values of Job Parameters Using the PDS Maintenance Module: Procedure (Cont.)**
 - **Ensure that the correct record is displayed on the PDSINFO Work Table**
 - **Enter the new value(s) in the appropriate field(s)**
 - **Click on the Save button**
 - **Repeat steps for additional records that need to be modified for the job**
 - **Click on the Exit button at the bottom of the PDSINFO Work Table**
 - **Click on the Exit button at the bottom of the PDS Maintenance Module Main Menu window**

PDS Maintenance Module: PDSINFO Jobs Table



PDS

Action Edit Block Field Record Query Help

PDSMTPJT 2001/04/03

PDSINFO Jobs Table Maintenance

Job Key	<input type="text"/>	Product Media	<input type="text"/>
Product Code	<input type="text"/>	Product Density	<input type="text"/>
Priority	<input type="text"/>	Product Format	<input type="text"/>
Copies	<input type="text"/>	Tape Blocking	<input type="text"/>
Status	<input type="text"/>	Job Status	<input type="text"/>
Q1 Id	<input type="text"/>	Due Date	<input type="text"/>
Stop Job	<input type="text"/>	Total Units	<input type="text"/>
Bad Key	<input type="text"/>	Processing Status	<input type="text"/>
Bad Status	<input type="text"/>	Project Id	<input type="text"/>
Note	<input type="text"/>		

Execute Query Lb1 Last Criteria Cancel Query Count Hits

Enter a query; press Alt-F11 to execute, Control-F4 to cancel.
Record: 1/1 Enter-Query Insert

PDS Maintenance Module: PDSINFO Work Table



PDS

Action Edit Block Field Record Query Help

PDSMT PDT 2001/04/03

PDSINFO Table Maintenance

Pdsinfokey	<input type="text"/>	Job Key	<input type="text"/>
Order Nbr	<input type="text"/>	Media Id	<input type="text"/>
Unit Nbr	<input type="text"/>	Ppf Key	<input type="text"/>
Status	<input type="text"/>	Selected	<input type="text"/>
Product Format	<input type="text"/>	Product Code	<input type="text"/>
Product Media	<input type="text"/>	Output Specs	<input type="text"/>
Product Density	<input type="text"/>	Priority	<input type="text"/>
Put Media Type	<input type="text"/>	Project Id	<input type="text"/>
Input Media Fmt	<input type="text"/>	Copies	<input type="text"/>
Bands	<input type="text"/>	Due Date	<input type="text"/>
Data Org	<input type="text"/>	Bin Nbr	<input type="text"/>
Tape Blocking	<input type="text"/>		
Retain Dem F	<input type="text"/>		
Ordering Id	<input type="text"/>		
Storage Location	<input type="text"/>		
Input Directory	<input type="text"/>		
Email Address	<input type="text"/>		

Enter a query; press Alt-F11 to execute, Control-F4 to cancel.
Record: 1/1 Enter-Query Insert

Troubleshooting PDS Problems (Cont.)



- **Changing the Values of Order Parameters Using the PDSIS Maintenance Module**
 - **The PDSIS Maintenance Module provides a means of changing values assigned to order parameters:**
 - » **Status of an order or unit**
 - » **Action to be sent to an order or unit**
 - » **Error flag for an order or unit**
 - » **Output specification for a unit**
 - » **Number of copies of a unit**
 - » **Directory (location) for PDSSA to pull data for a unit**
 - » **E-Mail address for ftp notification of order completion**

Troubleshooting PDS Problems (Cont.)



- **Changing the Values of Order Parameters Using the PDSIS Maintenance Module (Cont.)**
 - In order to maintain consistency between PDSIS packing lists and PDSSA media generation, changes to the values assigned to order/job parameters may need to be made using both the PDSIS and PDSSA maintenance modules
 - » Changes that affect both PDSIS and PDSSA should be made in PDSIS first, then PDSSA
 - » Some changes affect PDSIS only; for example, PDSSA does not contain customer shipping address information, so no shipping-address changes are necessary in PDSSA
 - No changes are needed in PDSSA if order processing in PDSIS has not made any data for an order available to PDSSA yet

Troubleshooting PDS Problems (Cont.)



- **Changing the Values of Order Parameters
Using the PDSIS Maintenance Module (Cont.)**

CAUTION

**Before changing output specs or number of copies
it is advisable to have in hand written authorization
to do so**

Troubleshooting PDS Problems (Cont.)



- **Changing the Values of Order Parameters Using the PDSIS Maintenance Module: Procedure**
 - **Start the PDSIS Maintenance Module**
 - **Click on the PDSIS Orders button**
 - **Copy the order number from the PDSIS OI Main Screen to the PDSIS Orders Maintenance Form**
 - **Click on the Execute Query button**
 - **Enter the new value(s) in the appropriate field(s)**
 - **Click on the Save button**
 - **Click on the Exit button**
 - **Click on the PDSIS Units button**
 - **Copy the order number from the PDSIS OI Main Screen**

Troubleshooting PDS Problems (Cont.)



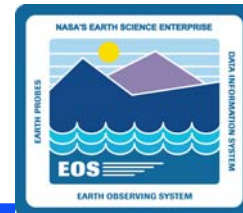
- **Changing the Values of Order Parameters Using the PDSIS Maintenance Module: Procedure (Cont.)**
 - Click on the Execute Query button
 - Ensure that the correct record is displayed on the PDSINFO Work Table
 - Enter the new value(s) in the appropriate field(s)
 - Click on the Save button
 - Repeat steps for additional records that need to be modified for the job
 - Click on the Exit button at the bottom of the PDSIS Units Maintenance Form
 - Click on the PDSIS Address button
 - Copy the order number from the PDSIS OI Main Screen

Troubleshooting PDS Problems (Cont.)



- **Changing the Values of Order Parameters Using the PDSIS Maintenance Module: Procedure (Cont.)**
 - Click on the Execute Query button
 - Ensure that the correct record is displayed on the on the PDSIS Address Maintenance Form
 - Enter the new value(s) in the Email field
 - Click on the Save button
 - Click on the Exit button
 - Click on the Exit button at the bottom of the PDSIS Maintenance Module Main Menu window

PDSIS Orders Maintenance Form (PDSISMTPOT)



W_1

Action Block Record Field Edit Query Help

PDSISMTPOT 1.5 PDSIS 03-APR-2001

Order Nbr Status ☐ Action ☐

Ecs Ordid Status Date

Ecs Reqid Date Entered

Error Flag ☐

Special Action

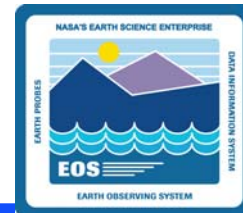
Odl File

Mail File

List Execute Query Last Criteria Cancel Query Count Hits

Enter a query; press Alt-F11 to execute, Control-F4 to cancel.
Record: 1/1 Enter-Query Insert

PDSIS Units Maintenance Form (PDSISMTPUT)



W_1

Action Block Record Field Edit Query Help

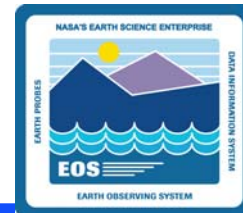
PDSISMTPUT 1.0 PDSIS 03-APR-2001

Order Nbr	<input type="text"/>	Status	<input type="checkbox"/>
Unit Nbr	<input type="text"/>	Status Date	<input type="text"/>
Ordering ID	<input type="text"/>	Action Flag	<input type="checkbox"/>
Copies	<input type="text"/>	Error Flag	<input type="checkbox"/>
Prod Code	<input type="text"/>	Tries	<input type="text"/>
Output Specs	<input type="text"/>	SCLI Tries	<input type="text"/>
Subsetted Data	<input type="checkbox"/>		
Size (MB)	<input type="text"/>		
ODL Child Node	<input type="text"/>		
Directory	<input type="text"/>		

List Execute Query Last Criteria Cancel Query Count Hits

Enter a query; press Alt-F11 to execute, Control-F4 to cancel.
Record: 1/1 Enter-Query Insert

PDSIS Address Maintenance Form (PDSISMTADD)



W_1

Action Block Record Field Edit Query Help

PDSISMTADD 1.3 PDSIS 02-JUL-2002

Order Nbr Address Type

First Middle Last Name

Organization

Address 1

Address 2

Address 3

City

State/Province Postal Code

Country

Phone Nbr Email

Fax

List Execute Query Last Criteria Cancel Query Count Hits

Enter a query; press Alt-F11 to execute, Control-F4 to cancel.
Record: 1/1 Enter-Query Insert

Troubleshooting PDS Problems (Cont.)



- **Checking/Clearing Errors on PDSIS**
 - Both the PDSIS OI Main Screen and the PDSIS OI Detail Screen provide means of checking and/or clearing errors associated with PDS orders

Troubleshooting PDS Problems (Cont.)



- **Checking/Clearing Errors on PDSIS: Procedure**
 - Click on the action button at the beginning of the relevant order status line or unit line
 - Select (highlight) Errors in the Action List box
 - Click on the OK button
 - Observe information displayed on the PDSIS OI Error Screen
 - To see an extended error message, perform the procedure for Viewing an Extended Error Message (subsequent section of this lesson)
 - To clear an error displayed on the PDSIS OI Error Screen, perform the procedure for Clearing an Error Displayed on the PDSIS OI Error Screen (subsequent section of this lesson)
 - Repeat steps as necessary
 - Click on the Return button

Troubleshooting PDS Problems (Cont.)



- **Checking PDSSA or PDSIS Log Files**
 - **PDSIS maintains the following kinds of daily logs for PDSIS troubleshooting purposes:**
 - » **Error log**
 - » **Debug log**
 - » **Socket log**
 - **PDSSA maintains the following kinds of logs:**
 - » **Operator Interface log (oilog)**
 - » **Job log**
 - **The PDS Cleanup Manager cleans up the PDSSA logs in accordance with the current PDSSA file cleanup strategy**
 - **The PDSIS Cleanup Manager cleans up the PDSIS socket logs in accordance with the current PDSIS file cleanup strategy**

Troubleshooting PDS Problems (Cont.)



- **Checking PDSSA or PDSIS Log Files:
Procedure**
 - **Access a terminal window logged in to the PDS
Server host**
 - **Change directory to the directory containing the
PDSSA or PDSIS log files**
 - **View the log file (e.g., type `pg filename` then press
Return/Enter)**
 - **Review the log file to identify problems that have
occurred**
 - **Respond to problems**
 - » **PDSIS- or PDSSA-related problems**
 - » **Communication problems**
 - » **Database problems**
 - » **Lack of disk space**

Troubleshooting PDS Problems (Cont.)



- **Checking/Restoring Synchronization of the Rimage PC Time with PDS System Time**
 - Time on the Rimage PC must be set to within five (5) minutes of the time on the PDS Server host
 - » If the time is not properly synchronized, CD and DVD jobs cannot proceed to a QC-Hold status
- **Checking/Restoring Synchronization of the Rimage PC Time with PDS System Time: Procedure**
 - Access a terminal window logged in to the PDS Server host
 - At the UNIX command line prompt on the PDS Server host type date then press the Return/Enter key

Troubleshooting PDS Problems (Cont.)



- **Checking/Restoring Synchronization of the Rimage PC Time with PDS System Time: Procedure (Cont.)**
 - On the Rimage PC double-click on the time displayed on the Windows task bar
 - If the date and time displayed on the Rimage PC are the same as those displayed on the PDS Server host, click on the Cancel button in the Date/Time Properties window on the Rimage PC
 - » End of procedure

If the time displayed on the Rimage PC is not the same as that displayed on the PDS Server host, on the Rimage PC enter the correct value(s) (as displayed on the PDS Server host) for the hour, minute and/or second in the digital time display

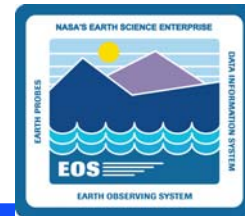
- Click on the OK button

Troubleshooting PDS Problems (Cont.)



- **Checking/Restoring the Rimage PC NFS Connection**
 - A Network File System (NFS) mount is needed in order for the Rimage software to see the job control directory (e.g., /pdssa/rimage_jobcontrol) on the PDS Server host
 - When the Windows NT system for the Rimage PC is set up, the PDS job control directory is typically mapped to the PC's Z: drive

Troubleshooting PDS Problems (Cont.)



- **Checking/Restoring the Rimage PC NFS Connection: Procedure**
 - **Select Start → Programs → Windows NT Explorer from the Windows task bar**
 - **In the left (All Folders) frame, scroll down to determine whether there is a network drive Z: to which rimage_jobcontrol is mapped**
 - **If there is a network drive Z: to which rimage_jobcontrol is mapped, click on the icon for the drive**
 - **If there is a problem with the NFS connection...**
 - » **Shut down the Rimage CD production software**
 - » **Select Start → Shut Down from the Windows task bar**
 - » **Click on the “Restart the computer?” radio button**
 - » **Click on the Yes button**

Troubleshooting PDS Problems (Cont.)



- **Checking/Restoring the Rimage PC NFS Connection: Procedure**
 - **If there is a problem with the NFS connection... (Cont.)**
 - » **Simultaneously press the Ctrl, Alt, and Delete keys on the keyboard**
 - » **Click on the OK button**
 - » **Ensure that the entries in the Username and Domain fields of the Logon Information window are correct**
 - » **Type the appropriate password in the Password field**
 - » **Click on the OK button**
 - » **Recheck the Rimage PC NFS connection**
 - **If the Rimage CD production software was shut down, restart the Rimage CD production software**
 - **Return to the procedure that recommended checking/restoring the Rimage PC NFS connection**

Troubleshooting PDS Problems (Cont.)



- **Cleaning up the CD-R_Images Folder on the Rimage: Procedure**
 - Double-click on the My Computer icon on the Rimage PC
 - Double-click on the icon for the appropriate drive (e.g., the E: drive)
 - Double-click on the icon for the CD-R_Images folder
 - Highlight and delete all unneeded files from the CD-R_Images folder
 - Select File → Production Order Editor from the pull-down menu in the Production Server window
 - Highlight and delete all unneeded files
 - Empty the Recycle Bin icon on the PC desktop
 - Dismiss the unneeded windows (click on the X in the box at the upper right-hand corner of each folder window)

Troubleshooting PDS Problems (Cont.)

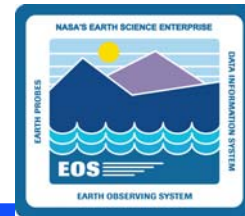


- **Clearing an Error Displayed on the PDSIS OI Error Screen: Procedure**

NOTE: It is generally good practice to ensure that the condition that caused an error has been corrected before clearing the error on the GUI (operator interface); otherwise, the error may recur

- Click on the action button at the beginning of the relevant error status line
- Select (highlight) Clear Error in the Action List box
- Click on the OK button

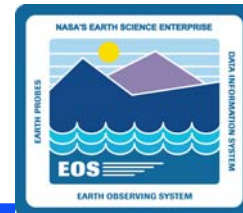
Troubleshooting PDS Problems (Cont.)



- **Determining Output Specifications Using the PDS Maintenance Module: Procedure**
 - **Start the PDS Maintenance Module**
 - **Click on the Product Media Descriptions button**
 - **Click on the Execute Query button**
 - **Observe the data displayed on the Product Media Descriptions Maintenance Form to determine whether the relevant product code has appropriate values**
 - **Click on the Exit button at the bottom of the Product Media Descriptions Maintenance Form**
 - **Click on the Exit button at the bottom of the PDS Maintenance Module Main Menu window**

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PDS Product Media Descriptions Form Displaying Output Specs



PDS

Action Edit Block Field Record Query Help

PDSMTFMD 2001/04/03

Product Media Descriptions Maintenance

Output Spec	Description	PDS Description
EMHAU	EMM HIGH DENSITY	EH
CIRMS	CDROM - NATIVE	CD
DLUCS	DLT	D7
DVD	DVD-R	DVD
FTP	FILE TRANSFER PROTOCOL	FT

Exit << < > >> Query Save

FRM-40355: Query will retrieve 5 records.
Record: 1/5 Insert

Troubleshooting PDS Problems (Cont.)



- **Determining Output Specifications Using the PDSIS Maintenance Module: Procedure**
 - **Start the PDSIS Maintenance Module**
 - **Click on the Outspec Info button**
 - **Click on the Execute Query button**
 - **Observe the data displayed on the PDSIS Output Specifications Window to determine the relevant output specifications**
 - **Click on the Exit button at the bottom of the PDSIS Output Specifications Window**
 - **Click on the Exit button at the bottom of the PDSIS Maintenance Module Main Menu window**

431

625-CD-609-003

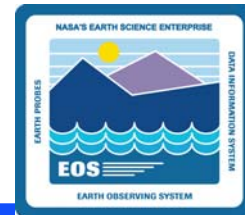
Troubleshooting PDS Problems (Cont.)



- **Determining Product Codes Using the PDS Maintenance Module: Procedure**
 - **Start the PDS Maintenance Module**
 - **Click on the Product Code Descriptions button**
 - **Click on the Execute Query button**
 - **Observe the data displayed on the Product Code Descriptions Maintenance Form to determine whether the relevant product code has appropriate values**
 - **Click on the Exit button at the bottom of the Product Code Descriptions Maintenance Form**
 - **Click on the Exit button at the bottom of the PDS Maintenance Module Main Menu window**

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PDS Product Code Descriptions Form Displaying Product Code



PDS

Action Edit Block Field Record Query Help

PDSMTPCD 2001/04/03

Product Code Descriptions Maintenance

Product Code	Description	PDS Description
1G001	GENERIC PDS A PRODUCT	GENERIC

Exit << < > >> Query Save

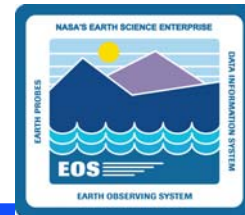
FRM-40355: Query will retrieve 1 record.
Record: 1/1 Insert

Troubleshooting PDS Problems (Cont.)



- **Determining Product Codes Using the PDSIS Maintenance Module: Procedure**
 - **Start the PDSIS Maintenance Module**
 - **Click on the Prod Code Info button**
 - **Click on the Execute Query button**
 - **Observe the data displayed on the PDSIS Product Code Info Window to determine the relevant product code**
 - **Click on the Exit button at the bottom of the PDSIS Product Code Info Window**
 - **Click on the Exit button at the bottom of the PDSIS Maintenance Module Main Menu window**

PDSIS Maintenance Module: Product Code Info Window



Lookup Proinfo Maintenance

Action Block Record Field Edit Query Help

PDSISMTLPT 1.0 PDSIS 03-APR-2001

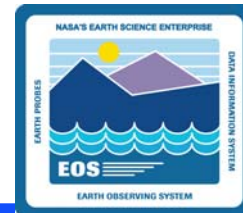
Prod Code	Product Format	PDS Project	Order Node	Default Size	Receive Email
I					

List Execute Query Last Criteria Cancel Query Count Hits

Enter a query; press Alt-F11 to execute, Control-F4 to cancel.
Record: 1/1 Enter-Query Insert

PDSIS Product Code Info Window

Displaying Product Code



Lookup Proinfo Maintenance

Action Block Record Field Edit Query Help

PDSISMTLPT 1.0 PDSIS 13-APR-2001

Prod Code	Product Format	PDS Project	Order Node	Default Size	Receive Email
6001	GENERIC	Pds project	000	1000	N

List Exit << < > >> Query Save

FRM-40355: Query will retrieve 1 record.
Record: 1/1 Insert

Troubleshooting PDS Problems (Cont.)



- **Determining the Status of PDS Tape/Disk Drives: Procedure**
 - **Access a terminal window logged in to the PDS Server host**
 - **Type `tpstat` then press the Return/Enter key**
 - **Type `mt -f device status` then press Return/Enter to determine the current status of a device**
 - **Type `mt -f device help` then press Return/Enter to determine other commands available for manual tape control:**
 - » **`erase`**
 - » **`offline`**
 - » **`rewind`**
 - » **`unload`**

Troubleshooting PDS Problems (Cont.)



- **Determining Which Instance of PDSOI Was Used to Activate a Job**
 - **Purpose**
 - » Identify the instance of the PDSOI that can be used for completing the job
 - The instance is important because each activated job's status file name starts with the OI ID (which identifies the PDSOI instance)
 - » Only an instance of the PDSOI with that OI ID can change the job's status to "QC-Hold" after the production module has sent the job's status file to the "status" subdirectory
 - » Typically the procedure for determining which instance of PDSOI was used to activate a job is performed while trying to determine why a PDS job does not change to a QC-Hold status although production was successful

Troubleshooting PDS Problems (Cont.)



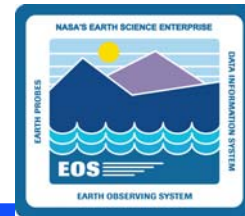
- **Determining Which Instance of PDSOI Was Used to Activate a Job (Cont.)**
 - At least two sources of information for determining which instance of PDSOI was used to activate a job:
 - » Name of the status file for the job
 - » Contents of the PPF for the job
- **Determining Which Instance of PDSOI Was Used to Activate a Job: Procedure**
 - Access a terminal window logged in to the PDS Server host
 - Change the current directory to the “status” directory
 - Request a listing of the subdirectories and files in the current directory

Troubleshooting PDS Problems (Cont.)



- **Determining Which Instance of PDSOI Was Used to Activate a Job: Procedure (Cont.)**
 - If there is a status file for the job (and if applicable), return to the appropriate step of the procedure for **Responding to a Job's Status Not Changing to QC-Hold Upon Successful Completion**
 - If there is no status file for the job in the status directory, change to the “summary” directory
 - If there is no status file for the job in either the status directory or the summary directory, type `pg PPF_filename` then press Return/Enter
 - Observe the entries in the PPF to determine the OI ID of the PDSOI instance that initiated the job
 - Return to the appropriate step of the procedure for **Responding to a Job's Status Not Changing to QC-Hold Upon Successful Completion** (if applicable)

Troubleshooting PDS Problems (Cont.)



- **Forcing AutoRimage Completion**
 - The PDS Job Monitor provides a means of forcing AutoRimage completion
 - Forcing AutoRimage completion results in a signal being sent to the job telling it to stop waiting needlessly and complete processing
 - » This is useful when a number of jobs are queued for a Rimage, but the waiting job has produced the media and is waiting needlessly
- **Forcing AutoRimage Completion: Procedure**
 - Place the mouse cursor on the relevant job in the running job list of the Job Monitor Main Window and click and hold the right mouse button
 - Select Force AutoRimage Completion from the pop-up menu
 - Click on the Yes button in the dialogue box

Troubleshooting PDS Problems (Cont.)



- **Reactivating Units: Procedure**
 - In the PDSINFO Work Table reset the Status field value for all affected units to Q (pending)
 - In the PDSINFO Jobs Table reset the Status field value for the job to Q (pending)
 - Reactivate the job using the Main OI Screen
 - » The units may not be displayed immediately on the PDSOI; however, they should appear on the Main OI Screen within 15 to 30 minutes

Troubleshooting PDS Problems (Cont.)



- **Reprinting a Label Stamped on a Disk:
Procedure**
 - Clean any ink from the disk with a cloth and alcohol-based cleaner
 - On the Rimage PC double-click on the Label Editor icon on the Windows desktop
 - Select File → Open from the pull-down menu in the Label Editor window
 - Select the appropriate drive (e.g., C:) in the Open window
 - Click on the icon for reprint.lab in the list of files in the Open window
 - Edit the file in the Label Editor window
 - Save (File → Save As) the edited template file as reprint.lab
 - Select File → Exit

Troubleshooting PDS Problems (Cont.)



- **Reprinting a Label Stamped on a Disk:
Procedure (Cont.)**
 - Double-click on the CD-R Workstation icon on the Windows desktop
 - Click on Start
 - Click on Add
 - Select Print Labels Only
 - Click on Next
 - Click on Next again
 - Ensure that Rimage Label (No Merge Fields) is selected in the Label Type field
 - Click on Next again
 - Select Browse
 - Double-click on the icon for reprint.lab (file name of the label template created and saved)

Troubleshooting PDS Problems (Cont.)



- **Reprinting a Label Stamped on a Disk:
Procedure (Cont.)**
 - Place the CD that needs the label in the Rimage input bin
 - Click on Finish
 - When the label has been reprinted, select File → Exit

Troubleshooting PDS Problems (Cont.)



- **Reprinting PDS Documents and Labels**
 - The problem may be that PDSSA or PDSIS has failed to print one of the following items or one of the following items has been damaged, lost, or misprinted:
 - » **Summary report**
 - » **Tape label**
 - » **Packing list**
 - » **Shipping label**

Troubleshooting PDS Problems (Cont.)



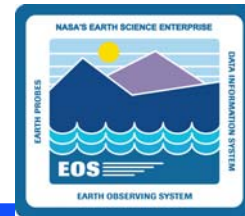
- **Reprinting PDS Documents and Labels (Cont.)**
 - **Packing lists and shipping labels can be reprinted using either the procedure for reprinting PDS documents and labels or the procedure for Changing the Values of Order Parameters Using the PDSIS Maintenance Module**
 - » **The PDSIS Orders Maintenance Form can be used to set the Action Code for the relevant order to “S”**
 - » **Both packing lists and shipping labels are printed in response to an “S” action code**
 - **To reprint a jewel-case insert go to the procedure for Responding to a Jewel-Case Insert Printing Failure**
 - **If a verification report is needed, rerun the verification**
 - » **Perform the procedure for Responding to a Status of QC-Hold (Performing a QC Check or Verification)**

Troubleshooting PDS Problems (Cont.)



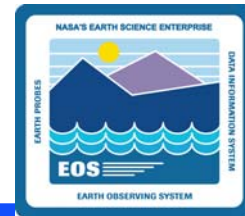
- **Reprinting PDS Documents and Labels:
Procedure**
 - **Access a terminal window logged in to the PDS Server**
 - **At the UNIX command line prompt type `cd` then press the Return/Enter key**
 - **Type `cd path` then press Return/Enter**
 - **Type `lp -d printerID filename` then press Return/Enter**
 - » **An alternative command is `lpr -P printerID filename`**
 - » **TS20112020001_0001_1.lbl is a tape label for job TS20112020001_0001**
 - » **TS20112130001_0001.sum is the summary report for job TS20112130001_0001**
 - » **TS20112130001.lbl is the shipping label for order TS20112130001**

Troubleshooting PDS Problems (Cont.)



- **Reprocessing a Job**
 - In general jobs are reprocessed in response to one of the following problems:
 - » Processing of an order will not complete
 - » An error occurs during processing
 - » The medium does not pass verification
 - If a job is in an error status, it may be possible to reprocess the job by activating the job's units
 - If the job is not in an error status or if it has failed the QC check (and is in QC-Hold status), it will probably be necessary to perform the following actions:
 - » Remove (delete) the associated PPF, status file, and image files
 - » Reset the unit and job status to Pending
 - » Reactivate the job

Troubleshooting PDS Problems (Cont.)



- **Reprocessing a Job: Procedure**
 - If the job is an 8mm job, check the job log to determine whether there was an I/O error
 - If the job log indicated an I/O (input/output) error, turn the power switch for the affected 8mm drive off then on
 - If the job is in an Error status, reactivate units in the job
 - » Access a terminal window logged in to the PDS Server
 - » Change to the PDS root directory
 - » List the subdirectories and files in the PDS root directory
 - » Remove job's PPF file from the directory
 - » Remove job's status file from the directory
 - » Change to the assemble directory

Troubleshooting PDS Problems (Cont.)



- **Reprocessing a Job: Procedure (Cont.)**
 - If the job is in an Error status, reactivate units in the job (Cont.)
 - » Remove job's directory (*order#_unit#*)
 - » Remove the job's image data from the directory if necessary
 - » Change the status of the job and its units to Q (Pending) and reactivate the units/job (procedure for Reactivating Units)
 - Monitor job processing

Troubleshooting PDS Problems (Cont.)



- **Resetting an Order or a Unit: Procedure**

NOTE: A PDSIS user ID (e.g., pdsis, pdsis_ts1, pdsis_ts2) is used in this procedure.

- Log in to the PDS Server host using the appropriate PDSIS user ID for the operating mode being used
- Change directory to the “utilities” directory
- Enter `EcPdPDSISResetOrder MODE orderId [unitID] &`
- Repeat the preceding step as necessary to reset additional order(s)/unit(s)

Troubleshooting PDS Problems (Cont.)



- **Responding to a CD/DVD Job Error Indicated on PDSOI: Procedure**
 - Access a terminal window logged in to the PDS Server
 - Change to the /pdssa/rimage_jobcontrol directory
 - Display the content of pwrtool.log
 - Examine the content of the PowerTools log for “File already exists” or “File not found”
 - If one of the problems is found in the PowerTools log, perform the procedure for Cleaning up the CD-R_Images Folder on the Rimage

Troubleshooting PDS Problems (Cont.)



- **Responding to a Jewel-Case Insert Printing Failure**
 - **The problem is that a jewel-case insert has failed to print and the following circumstances exist:**
 - » **Data have been written to the medium**
 - » **Status has changed to QC-Hold**
 - » **Summary sheet has printed**
 - » **There are no obvious printer faults (e.g., paper supply empty, paper jam)**
 - » **Jewel-case insert has not printed**

Troubleshooting PDS Problems (Cont.)



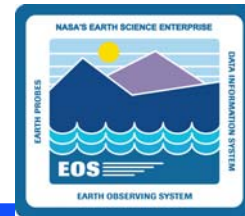
- **Responding to a Jewel-Case Insert Printing Failure: Procedure**
 - Access a terminal window logged in to the PDS Server host
 - Change to the “summary” directory
 - List the subdirectories and files in the “summary” directory
 - Observe the entries in the list to identify the status file for the job
 - If reprinting all jewel-case inserts for a multiple CD/DVD job, enter `mv statusfilename ../status`
 - If the printer still does not provide output or if reprinting an individual jewel-case insert, enter `lp -d printerID insertfilename`
 - If the specified file did not print on the printer, call the help desk and submit a trouble ticket

Troubleshooting PDS Problems (Cont.)



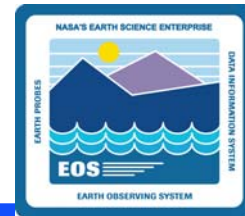
- **Responding to a Job's Status Not Changing to QC-Hold Although Production is Successful**
 - The problem is that a PDS job does not change to a QC-Hold status although production was successful
 - Possible causes include the following items:
 - » At least two instances of PDSOI with the same OI ID are currently active
 - » The instance of PDSOI with the OI ID that activated the job is not currently active
 - » The time on the Rimage PC is not set to within five minutes of the time on the PDS Server host (CD or DVD job only)

Troubleshooting PDS Problems (Cont.)



- **Responding to a Job's Status Not Changing to QC-Hold Although Production is Successful: Procedure**
 - Review the job log to verify that production of the affected job was in fact successful
 - If job production was not successful, go to the procedure for Reprocessing a Job
 - If the affected job is a CD or DVD job, check the synchronization of the Rimage PC time with PDS system time
 - If the affected job is not a CD or DVD job or if checking/restoring synchronization of the Rimage PC time with PDS system time is not effective, determine which instance of PDSOI was used to activate the job
 - Access a terminal window logged in to the PDS Server host

Troubleshooting PDS Problems (Cont.)



- **Responding to a Job's Status Not Changing to QC-Hold Although Production is Successful: Procedure (Cont.)**
 - At the UNIX command line prompt type `ps -ef | grep PDSMTOIX` then press Return/Enter
 - If there are any active instances of PDSOI currently running, observe the header of each Main OI Screen to identify the OI ID that applies to each
 - If there are multiple instances of PDSOI currently running with what should be the single controlling OI ID on each instance of the GUI, shut down all but one instance of the PDSOI with that OI ID
 - If there is no current instance of PDSOI with the OI ID indicated in the status file name or .ppf contents, start another PDSOI using the specified OI ID

Troubleshooting PDS Problems (Cont.)



- **Responding to a Job's Status Not Changing to QC-Hold Although Production is Successful: Procedure (Cont.)**
 - **Change the values of the following job parameters using the PDS Maintenance Module:**
 - » **PDSINFO Work Table: change the Status of each unit in the job to F**
 - » **PDSINFO Jobs Table: change the Status of the job to F**
 - **If the Job Status for the job (on the PDSOI Main OI Screen) has changed to QC-Hold, perform the QC check**
 - **If the Job Status for the job (on the PDSOI Main OI Screen) has not changed to QC-Hold, reprocess the job**

Troubleshooting PDS Problems (Cont.)



- **Responding to a Job on a Lag Report: Procedure**
 - **Start the PDS Maintenance Module**
 - **Observe the data in all of the various fields on the PDSINFO Work Table to determine whether there is missing data in any field for the job, especially in the Product Code and Output Specs fields**
 - **If there is missing or incorrect data in any field, enter the appropriate value in the field**
 - **Repeat for all records that need to be modified for the job**
 - **Determine whether there are appropriate entries in the PVT_PRCDTBL_TBL database table for Product Code**

Troubleshooting PDS Problems (Cont.)



- **Responding to a Job on a Lag Report: Procedure (Cont.)**
 - Determine whether there are appropriate entries in the OUT_OTSPTBLV_TBL database table for Output Specs
 - Perform the procedure for Specifying Job Selection Criteria, ensuring that the specified criteria include the values for the job on the lag report
 - Observe information displayed on the Main OI Screen
 - » The job on the lag report should be displayed on the Main OI Screen
 - If the job on the lag report is still not displayed on the Main OI Screen, call the help desk and submit a trouble ticket in accordance with site Problem Management policy

Troubleshooting PDS Problems (Cont.)



- **Responding to a Locked-Up Screen:
Procedure**
 - In the UNIX window where the PDSOI was originally started enter `ps -ef | grep PDSMTOIX`
 - Enter `kill -15 processID`

Troubleshooting PDS Problems (Cont.)



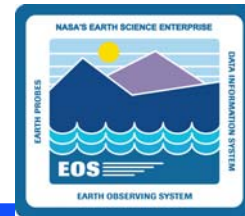
- **Responding to a Problem Starting PDSOI: Procedure**
 - Wait a few seconds for the PDSOI to be displayed
 - If the PDSOI is not displayed after a few seconds, determine whether the DISPLAY environmental variable was set properly
 - If the DISPLAY environmental variable was not set properly, set the DISPLAY environmental variable
 - Perform the procedure for Starting the PDS Operator Interface (PDSOI)
 - If the DISPLAY environmental variable was set properly, determine whether the alias pdsoi is set properly
 - If the DISPLAY environmental variable was not set properly, set it

Troubleshooting PDS Problems (Cont.)



- **Responding to a Save Changes Dialogue Box When Exiting a Maintenance Module Window: Procedure**
 - Click on the Yes button to accept the changes and dismiss the dialogue box and maintenance module window or click on the No button to dismiss the dialogue box and maintenance module window without accepting the changes made to the data on the form
 - If changes should be saved but it is not possible to save changes and get out of the maintenance module window (if the dialogue does not accept Yes as a response), call the help desk and submit a trouble ticket in accordance with site Problem Management policy

Troubleshooting PDS Problems (Cont.)



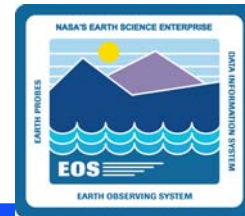
- **Responding to a "Waiting for Drive Selection" Message on the Job Monitor: Procedure**
 - Minimize other windows in the workspace and see if the Media Drive Selection window was hidden behind another window
 - If the Media Drive Selection window is visible in the workspace, go to Step 4 of the procedure for Activating a Job
 - If the Media Drive Selection window is not visible anywhere in the workspace, access a terminal window logged in to the PDS Server host
 - Change to the \$PDSROOT/run directory
 - Enter `genericout job_key`
 - If the Media Drive Selection window is visible in the workspace, go to Step 4 of the procedure for Activating a Job

Troubleshooting PDS Problems (Cont.)



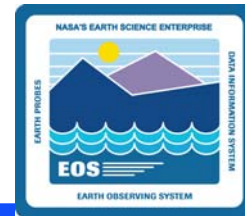
- **Responding to Duplicate Jobs on the PDSOI: Procedure**
 - Observe the job keys of the "duplicate" jobs on the Main OI Screen to verify that the jobs are true duplicates
 - Use the PDS Maintenance Module PDSINFO Jobs Table to determine whether any field has data that differ from preceding records, determine which record is the correct one
 - Repeat for all records with the same job key in the PDSINFO Jobs Table
 - If any field has data that differ from preceding records, determine which record is the correct one
 - Delete all incorrect records (select Record → Remove from the pull-down menu)

Troubleshooting PDS Problems (Cont.)



- **Responding to Duplicate Jobs on the PDSOI: Procedure (Cont.)**
 - If the OI ID specified in the PDSINFO Jobs Table is different from the OI ID used in starting the current PDSOI, start another PDSOI using the OI ID specified in the PDSINFO Jobs Table
 - Process the job using the newly started PDSOI
 - If the values of any parameters on the PDSINFO Work Table are inconsistent with the values in the fields on the PDSINFO Jobs Table, enter the appropriate values in the PDSINFO Work Table
 - Repeat for all records for the job
 - If the PDSOI continues to create duplicate jobs, use the PDS Maintenance Module to change the values of job parameters that have blank or invalid values and remove duplicate records

Troubleshooting PDS Problems (Cont.)



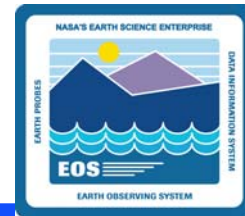
- **Responding to Low Disk Space**
 - If disk space becomes low it should be noticeable in the **Assembly Disk Usage** section of the **Job Monitor Main Window**
- **Responding to Low Disk Space: Procedure**
 - Wait before activating any jobs that would use the disk resource and perform the steps that follow
 - Complete orders that are being processed
 - Access a terminal window logged in to the **PDS Server host**
 - Change to the **/pdssa/assemble** directory
 - List subdirectories and files in the **/pdssa/assemble** directory
 - Remove unneeded data (files or subdirectories) from the directory

Troubleshooting PDS Problems (Cont.)



- **Responding to No Printouts (Either Jewel-Case Inserts or Paper Reports): Procedure**
 - Observe the printer to determine whether there are any obvious faults (e.g., power off, paper supply empty, paper jam)
 - Respond to obvious faults, if any
 - If the jewel-case printer is affected and the printer displays a “Wrong Media in Multi-Purpose Tray” message, reset the printer settings
 - Click on Printers on the menu bar of the Main OI Screen
 - If no printer is selected for either Report Printer or Jewel-Case Insert Printer, select the appropriate printer(s)
 - If either printer still does not provide output, access a terminal window logged in to the PDS Server host

Troubleshooting PDS Problems (Cont.)



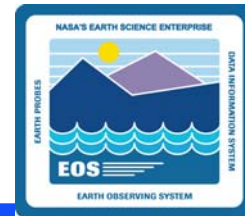
- **Responding to No Printouts (Either Jewel-Case Inserts or Paper Reports): Procedure (Cont.)**
 - **At the UNIX command line prompt enter `lp -d printerID filename`**
 - » **For example:**
 - » **`lp -d x0dih04 0000104030361_0001.ppf`**
 - **If the specified file did not print, call the help desk and submit a trouble ticket in accordance with site Problem Management policy**
 - **If the test file did print on the printer and it is the jewel-case printer that is affected, examine the job log for an entry indicating that the job has stalled while waiting for status from Rimage**
 - **If the job has stalled while waiting for status from Rimage, check the NFS connection**

Troubleshooting PDS Problems (Cont.)



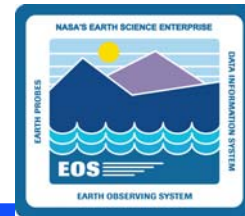
- **Responding to No Printouts (Either Jewel-Case Inserts or Paper Reports): Procedure (Cont.)**
 - If the NFS connection is good or if the job does not go to completion after the NFS connection has been restored, check synchronization of the Rimage PC time with the PDS system time
 - If the problem has not been resolved through any of the preceding actions, call the help desk and submit a trouble ticket in accordance with site Problem Management policy

Troubleshooting PDS Problems (Cont.)



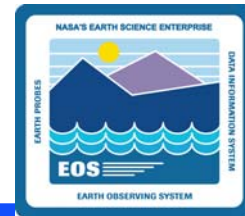
- **Responding to PDSOI's Failure to Update Status: Procedure**
 - Access a terminal window logged in to the PDS Server host
 - List the subdirectories and files in the “status” directory
 - Identify the status file for the job in the list of subdirectories and files in the “status” directory
 - If there is no status file for the job, go to the procedure for Responding to a Job’s Status Not Changing to QC-Hold Although Production is Successful
 - If there is no current instance of PDSOI with the OI ID included in the status file name, start another PDSOI using the specified OI ID
 - Process the job using the PDSOI started using the OI ID specified in the status file name

Troubleshooting PDS Problems (Cont.)



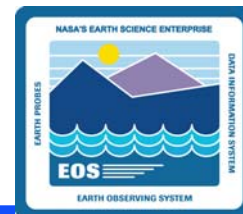
- **Viewing a Job Log or Job Production Parameter File (PPF) Using UNIX Commands**
 - If the PDS Job Monitor is not available, UNIX commands can be used to gain access to a log file or job Production Parameter File (PPF)
- **Viewing a Job Log or Job Production Parameter File (PPF) Using UNIX Commands: Procedure**
 - Access a terminal window logged in to PDS Server
 - Change directory to the PDS root directory, which contains the PPF files for the jobs being processed
 - If a job log is to be viewed, change directory to the “summary” directory, which contains the log files
 - Type `pg filename` then press Return/Enter
 - Review the PPF or log

Troubleshooting PDS Problems (Cont.)



- **Viewing a Job Log Using the PDS Job Monitor**
 - The PDS Job Monitor provides a relatively easy means of gaining access to the log for a particular job
- **Viewing a Job Log Using the PDS Job Monitor: Procedure**
 - Place the mouse cursor on the relevant job in the running job list of the Job Monitor Main Window and click and hold the right mouse button
 - Select View Job Log from the pop-up menu
 - Review the log
 - To exit from the log click on the Exit button at the bottom of the window

PDS Job Log



```
Job Log For 0119903110050_0049

[dqqout-debug] Quadname for unit 50 is JUNO_TX_SE
[dqqout-debug] Quadname for unit 51 is JUNO_TX_NW
[dqqout-debug] Quadname for unit 52 is JUNO_TX_NE
[dqqout-debug] Quadname for unit 53 is DEATON_DRAW_TX_SW
[dqqout-debug] Quadname for unit 54 is DEATON_DRAW_TX_SE
[dqqout-debug] Quadname for unit 55 is DEATON_DRAW_TX_NW
[dqqout-debug] Quadname for unit 56 is DEATON_DRAW_TX_NE
[dqqout-debug] Quadname for unit 57 is OGLESBY_RANCH_TX_SW
[dqqout-debug] Quadname for unit 58 is OGLESBY_RANCH_TX_SE
[dqqout-debug] Quadname for unit 59 is OGLESBY_RANCH_TX_NW
[dqqout-debug] Quadname for unit 60 is OGLESBY_RANCH_TX_NE
[dqqout-debug] Quadname for unit 61 is MOORE_RANCH_TX_SW
[dqqout-debug] Quadname for unit 62 is MOORE_RANCH_TX_SE
[dqqout-debug] Quadname for unit 63 is MOORE_RANCH_TX_NW
[dqqout-debug] Quadname for unit 64 is MOORE_RANCH_TX_NE
[dqqout-debug] Quadname for unit 65 is ELDORADO_NW_TX_SW
[dqqout-debug] Quadname for unit 66 is ELDORADO_NW_TX_SE
[dqqout-debug] Quadname for unit 67 is ELDORADO_NW_TX_NW
[dqqout-debug] Quadname for unit 68 is ELDORADO_NW_TX_NE
[dqqout-debug] Quadname for unit 69 is ELDORADO_NE_TX_SW
[dqqout-debug] Quadname for unit 70 is ELDORADO_NE_TX_SE
[dqqout-debug] Quadname for unit 71 is ELDORADO_NE_TX_NW
[dqqout-debug] Quadname for unit 72 is ELDORADO_NE_TX_NE
[dqqout-debug] Opening summary file /sgs18/pds1/pds/summary/0119903110050_0049.s
um
[dqqout-debug] ENTERING STAGE: Retrieving Data From Silo
[dqqout-debug] Pre-staging /doqq/J/juno_TX/C3010156.SWS.849611
[dqqout-debug] Checking for existence on UNITREE
[dqqout-debug] umget -sd "/doqq/J/juno_TX" C3010156.SWS.849611
\r[informational] Remote system is <edcsgs3-fddi>
250 UniTree CWD command successful.
257 "/doqq/J/juno_TX" is current directory.
505 /doqq/J/juno_TX/C3010156.SWS.849611: is being moved from the archive...
257 "/doqq/J/juno_TX" is current directory.
[dqqout-debug] Pre-staging /doqq/J/juno_TX/C3010156.SES.849610
[dqqout-debug] Checking for existence on UNITREE
[dqqout-debug] umget -sd "/doqq/J/juno_TX" C3010156.SES.849610
\r[informational] Remote system is <edcsgs3-fddi>
250 UniTree CWD command successful.
257 "/doqq/J/juno_TX" is current directory.
```

Refresh Top Bottom Print Exit

Troubleshooting PDS Problems (Cont.)



- **Viewing a Job Production Parameter File (PPF) Using the PDS Job Monitor**
 - The PDS Job Monitor provides a relatively easy means of gaining access to the PPF for a job
 - The PPF specifies all of the information that the job needs to run (e.g., the media type, data path, bin number, etc.)
- **Viewing a Job Production Parameter File (PPF) Using the PDS Job Monitor: Procedure**
 - Place the mouse cursor on the relevant job in the running job list of the Job Monitor Main Window and click and hold the right mouse button
 - Select View Job PPF from the pop-up menu
 - Review the PPF file
 - Click on the Exit button at the bottom of the window

PDS Job PPF Window



```
PPF For 0119905260067_0002
```

```
NCOPIES I 1 1
OI_ID S 1 PDS1_drg
BIN S 1 45
DENSITY S 1 0
BLKSIZ I 1 0
UNITS I 1 2
MTYPE S 1 CD
PRINTER S 1 ops
PCODE S 1 N200
FORMAT S 1 NDF
ORDNUM S 1 0119905260067_0001
PROJID S 1 NLAPS
BANDS S 1 1234567
KPDEM S 1 N
ORDID S 1 LT4198056008806910
DPATH S 1 /image0/persist/nlrt/workorders/01199052600670002
```

Print Exit

Troubleshooting PDS Problems (Cont.)



- **Viewing an Extended Error Message:
Procedure**
 - Click on the action button at the beginning of the relevant error status line
 - Select (highlight) Expanded Message in the Action List box
 - Click on the OK button
 - Observe information displayed on the extended message window
 - To return to the Checking/Clearing Errors on PDSIS procedure click on the Close button

PDSIS Extended Error Message Window



PDSIS Errors Screen

PDSISMTERR 1.0 PDSIS 13-APR-2001

Date/Time	Order Number	Unit Number	Error Source	Error Message
<input type="checkbox"/> 20010328110509	0000103280175	4	pdsinfoTbl.SetOrderUnit	No entry in pdt_pdsinfo info
<input type="checkbox"/> 20010328110509	000010			r in pdt_pdsinfo info
<input type="checkbox"/> 20010328110509	000010			r in pdt_pdsinfo info
<input type="checkbox"/> 20010328052409	000010			r in pdt_pdsinfo info
<input type="checkbox"/> 20010328110510	000010			r in pdt_pdsinfo info
<input type="checkbox"/> 20010328110510	000010			r in pdt_pdsinfo info
<input type="checkbox"/> 20010329121508	000010			r in pdt_pdsinfo info
<input type="checkbox"/> 20010329011508	000010			r in pdt_pdsinfo info
<input type="checkbox"/> 20010329011508	000010			r in pdt_pdsinfo info
<input type="checkbox"/> 20010329011508	000010			r in pdt_pdsinfo info
<input type="checkbox"/> 20010329025009	000010			celled in ECS
<input type="checkbox"/> 20010329025509	000010			r in pdt_pdsinfo info
<input type="checkbox"/> 20010329025509	000010			entry in pdsinfo_tbl
<input checked="" type="checkbox"/> 20010329034010	000010			r in pdt_pdsinfo info
<input type="checkbox"/> 20010329034010	000010			entry in pdsinfo_tbl
<input type="checkbox"/> 20010330111942	000010			ecution error
<input type="checkbox"/> 20010330111942	000010			ecuting SCLI
<input type="checkbox"/> 20010330112129	000010			ecution error
<input type="checkbox"/> 20010330112129	0000103290243	2	EcsDataRequest.ScliRequest	Error executing SCLI
<input type="checkbox"/> 20010330035819	0000103300285	1	CompleteOrder.rum	Could not update the action_f

No entry in pdt_pdsinfo information for order_nbr: 0000103290242 and unit_nbr: 2

Close

Return

Record: 34/? Insert